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from Dan Ablan

The sign on the wall reads "Be What You Is, Because If You Be What You Ain't, You Ain't What You Is." It took me quite a few years to figure that out.

My aunt gave me that plaque for a birthday present when I was 5. I think I was 12 before I understood it, and I still have it hanging around the house somewhere. Surprisingly, you think about your childhood often, especially as age 40 creeps up, just a few years away. You think about the things you did, and the things you want to accomplish. So far, I have no regrets, as everything thus far has been a learning experience, both good and bad. But one thing that always holds true is that plaque from my 5th birthday. It seems to infect everything I do, even in animation.

Over the years, I've learned a lot about LightWave, as have many of you. I've learned a lot about business, good people, and bad people. Regardless of what the rest of the "glass is half full" people say, there are a lot of bad people out there. They will do anything they can to tear you down, rip you off, and destroy your attitude. I know many of you can relate to this, and as "artists" you often get treated unfairly. Clients can take advantage of you, but if you had my plaque, all of it would just roll off your back. You would focus on what makes you happy, and work towards your goals. Too much time is wasted on stress, work and money. I'm pretty sure it's safe to say that you didn't get into 3D animation for money, but rather because you loved doing it. Don't forget that as you forge ahead into your next project. Take a look at the articles in this issue about Tim Albee and his Ghost Warrior movie. Read what he went through to get that created, and it will inspire you to make something of your own.

We've got a lot of great things in this issue for you to dig your teeth into, and there's even more coming down the pipe in upcoming issues, such as medical modeling, LightWave 8 tutorials, and even Digital Fusion tutorials. For now, check out what we've put together for you, and remember, be what you is.

Dan Ablan

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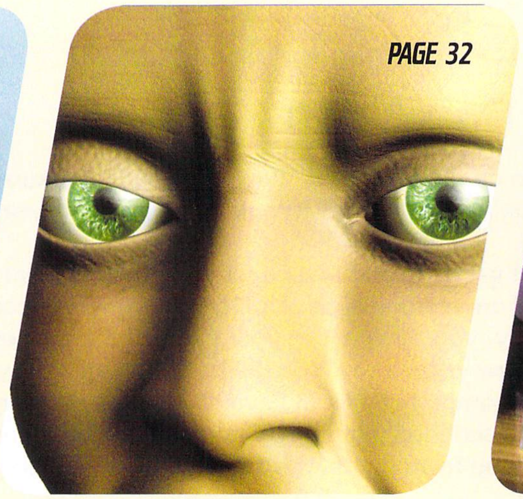

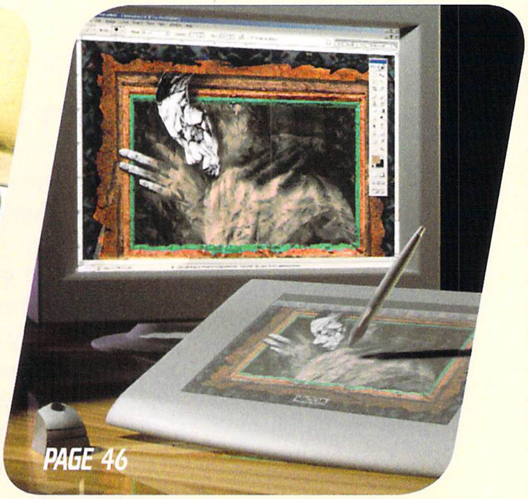

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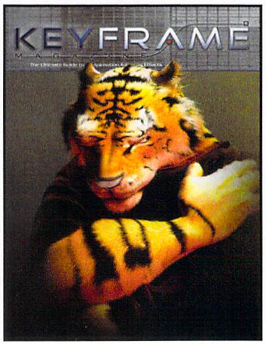

Cover art by Timothy Albee

Kaze Headshot 2, LightWave, Sasquatch, Digital Fusion. This 2625 x 3375 PIXEL image took 4366 seconds (1hour, 12 minutes) to render on a dual 2GHz Intel with 2GB of RAM. The Scene has 77426 "polygons" at the character's Level 3 Subdivision (seen here). The richness of detail within the fur comes from Worley Labs' Sasquatch. Eyeon's Digital Fusion was used to blend the "Kaze Plate" into a portrait-style setting, adding film-grain and Depth-of-Field effects in near-real-time. The strengths of LightWave's Inverse Kinematics engine driving my Character Setup, (See LightWave 3D Character Animation,) let me open myself to Kaze's direction of my moving the controls as his pose took shape. *(This is the one, key "secret" to doing good animation: Use tools that don't get in your way, and learn the basics so well that you can sit back and be amazed at what comes through you.)* Image is copyright 2003-2004 Timothy Albee Animation. All Rights Reserved. Reproduced with permission.

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LW ESSENTIALS–USING THE PATH TOOL

BY BRAD CARVEY

The Path Tool is a hidden 7.5 LightWave tool option that allows the user to modify an object's motion path in Layout while the object is moving. To use the Path tool, we must add a keyboard shortcut or menu item to Layout.

ADDING A PATH TOOL MENU ITEM

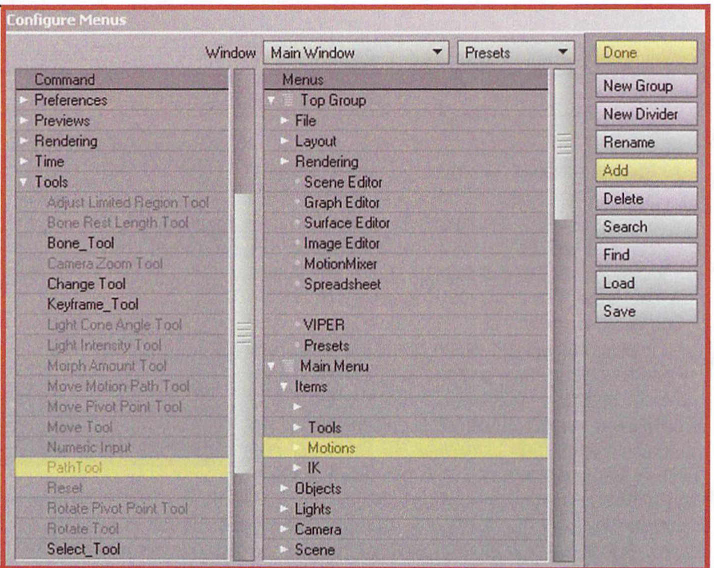
1. Press the Alt key and the F10 key at the same time. This will open the Configure Menus Interface. See FIGURE 1.
2. Select Tools Command on the left side.
3. Scroll down and Select Path Tool.
4. Scroll down on the right side and select Items under Main Menu
5. Select Motions or any location that you would like to place your Path Tool Menu.
6. Select Add button on the right side.
7. Select Done button.

The Path Tool menu item will appear on your Layout Interface. See FIGURE 2. Note that some of the commands are gray while others are black. The black ones are not assigned to a menu item. You may want to scroll through the commands to discover other tools that are not assigned to menu items. Some of them are like buried treasure.

To use the Path Tool, you must first load an object and create a path.

1. Load object. For this example, I loaded a Ball object.
2. Create Key (return key) at frame 0.
3. Move the object and create key frames at 15, 30, 45 and 60. See FIGURE 2.
4. Select the Path Tool Menu Item. See FIGURE 2.
5. Select the Play button on the lower right side of the Layout Screen. See FIGURE 2.
6. As the object moves, select a keyframe. Hold the left mouse button down and move the keyframe around. The object's path will be modified as it's moving.
7. Select another tool, i.e. Move, to deselect the Path Tool.

The Path Tool is a fun and useful tool for tweaking motion paths. Try using multiple views with the Path Tool. For example, you can have a perspective view open to adjust the camera's motion path, while a camera view will show the result of tweaking the camera's motion path.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New Divider
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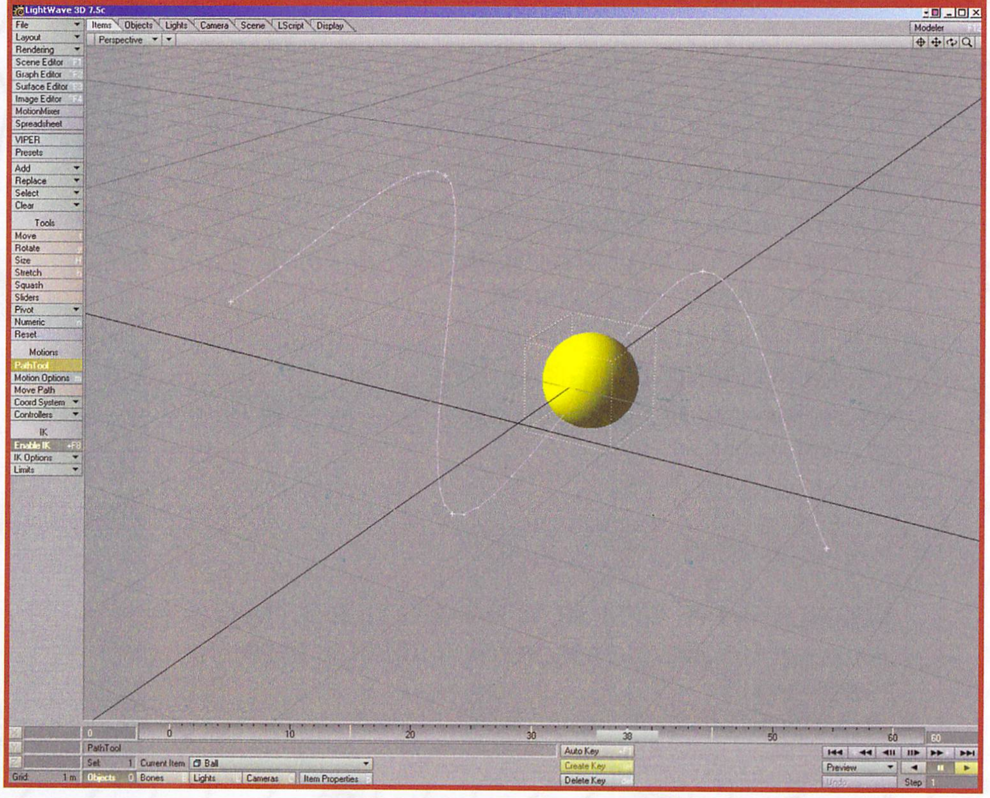
FIGURE 1 (ABOVE) THE CONFIGURE MENUS WINDOW.

FIGURE 2 (BELOW) LIGHTWAVE 7.5'S ITEMS MENU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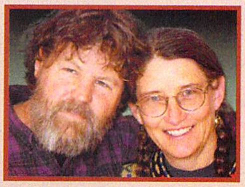


BRAD CARVEY HAS BEEN DOING COMPUTER ANIMATIONS FOR A LONG TIME. IN 1969, BRAD USED AN ANALOG COMPUTER, WHICH WAS THE SIZE OF A CAR, TO PRODUCE HIS FIRST COMPUTER ANIMATION. BRAD IS AN ELECTRICAL ENGINEER AND AN EMMY AWARD WINNING MEMBER OF THE VIDEO TOASTER DEVELOPMENT TEAM. HE PREFERS TO DO FEATURE FILM WORK. HIS CREDITS INCLUDE FILMS LIKE “MEN IN BLACK,” “STUART LITTLE,” BLACK HAWK DOWN,” KATE & LEOPOLD” AND “MASTER OF DISGUISE.”

CONFESSIONS OF A KEYFRAME COLLECTOR

BY HUNTER WOLF

OK, I'll be the first to admit it–I'm a closet Keyframe Magazine collector and cataloger. My system is more organized than the Library of Congress. There, that's off my chest. Wait…what do you mean I'm not the only one?

I've been an avid reader of Keyframe much longer than a scribe of its many articles. As a matter of fact, when I spoke to the publisher over the phone, he mentioned to me that he found it amazing how many readers ordered all of the back issues, saved and catalogued them. I broke in with, "So do I!" and the idea for this article was formed.

I was relatively new to LightWave and discovering Keyframe was like finding a genie in a bottle. There's nothing more important to someone who has found a favorite piece of software than a favorite magazine to go with it. And the cool thing is, you knew that out of all the people in the bookstore, you were probably the only one who knew what LightWave was. You were a part of a small but dedicated group of people who would rather be banished to a deserted island than give up their 3D. Well, banished with LightWave, Keyframe and inconceivable amounts of caffeinated beverages.

I would (and please put away the geek-o-meters now) drive up to 40 minutes to the only Barnes and Noble bookstore in my area that carried it. I'd call the periodicals manager each month and bug him until he confirmed that the new issue was out. Then they'd put my name on the cover with a sticky note and hold it for me. Several gallons of gas and tolls later, I was introduced to my shiny brand new issue, chock full of insight into what's new and who's who in my 3D arena.

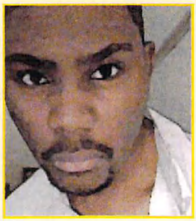
An individual issue of Keyframe is like a snowflake–relatively harmless and very easy to remember the contents of. You know exactly what page that tutorial you purchased the magazine for is on. But, let your collection grow and that one snowflake becomes an avalanche–you have an idea that an article is in an issue with a reddish cover with a belly dancer…or so you think. Or was it a bluish cover with an airplane on it?

So, what to do? If you're like me, you have yellow Post-it notes sticking out of every conceivable page, and at all angles, with handwritten notes like "How to make an explosion" or "Lighting tips." You may also have allotted your issues their own magazine holder and placed it in your office or home library's tech section.

So, why exactly is keeping track of which articles are where, and taking such care of your issues so important? Because technology's price has come down so dramatically, that almost anyone can take all of those crazy ideas they've dreamt about for years and finally bring them to life. You can be your own film studio, in your own home, wearing your pajamas and socks, shadowing every move Spielberg and Spike Lee make on your own.

And, when inspiration hits you as you drive through rush hour traffic to get behind the desk of your home studio, you want to know where to find that great article on putting hair on your superheroes.

In this world, full of war, mayhem, and more reality shows than you can shake a stick at, it's good to know that an old friend is always waiting for you. And that a new issue, with tips, tricks and reviews, is always around the corner. I don't know about you, but for me Keyframe is never put in the recycle bin and never loaned out to anyone. Go get your own. ■



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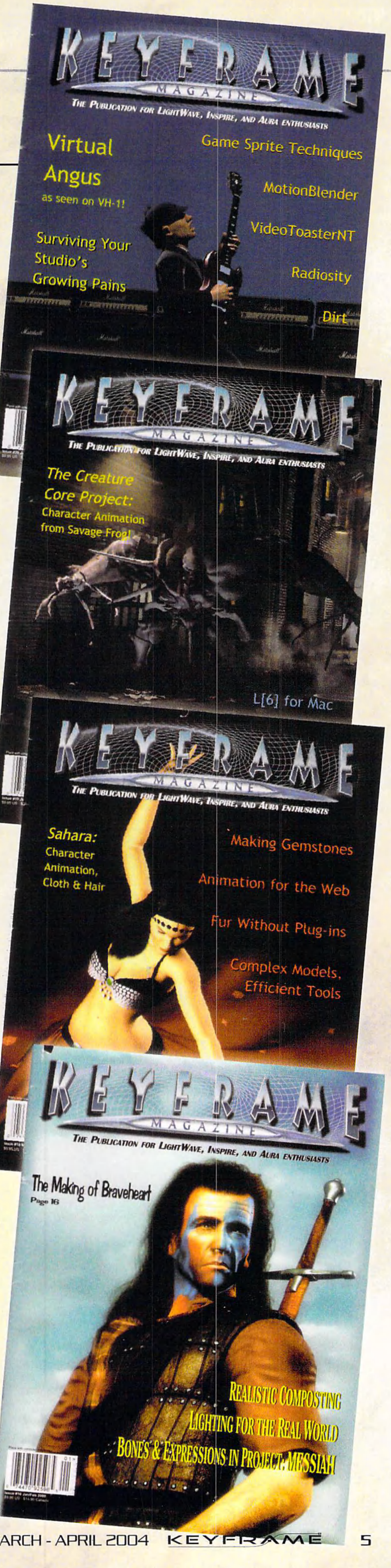
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Advisory Board Interview
***Leigh van der Byl*:**

A MOMENT IN THE LIFE OF LEIGH VAN DER BYL

BY AKIKO ASHLEY

THE ADVISORY BOARD INTERVIEWS ARE A SERIES OF INTERVIEWS TO INTRODUCE MEMBERS OF THE ADVISORY BOARD AND INFORM USERS OF THE RESOURCES AVAILABLE WITHIN THE DIGITAL COMMUNITY.

IMPECCABLY DETAILED ARMOUR

Leigh is a very well known digital artist in the professional world of computer animation. She lives in South Africa and communicates to the world through the portal of her flickering screen attached to her faithful computer. You may know her from CG Talk, where she has been openly sharing her knowledge of texturing and other tricks with digital tools for a few years – one of her pet peeves is people who hog their techniques to themselves rather then sharing them with the community.

Leigh started working with computers when she was six years old with such tools as Telepaint, and when she was 11, she decided she wanted to work one day in computer animation. At 16, bored with the regular curriculum of her high school, she went to a fine arts school instead, after which she went to study graphic design and animation, where she graduated at the top of her class.

After graduation, she spent a year at home strengthening her skills. A friend went into business with her, but she decided against it after a few months because she did not feel she had a strong business sense at the time. She took a job lecturing about editing and compositing at a local college, but she became unhappy there because they were not focused on giving people a good education, so she left, and took a position at a local Visual Effects Company. There she began using LightWave 3D, working on commercials, broadcast branding, short films, promos and some film pitch work, primarily as a texture artist, although she also ended up doing a fair amount of modeling.

At this point, she began spending some time on the CG Talk forums and after a few months began moderating them. The forums gave her the ability to help artists who were struggling with their software. Leigh eventually got a publishing deal with Wordware Publishing to write a texturing book for LightWave 3D. Leigh has other facets to her personality that make her a unique person – a tattooed and pierced vegetarian bass-player who has a phobia of lampshades and ships. I think the funniest thing she told me is that she can mimic people's voices after hearing them once. She knows the entire script of "Spaceballs" by heart and has been an avid Monty Python fan since she was eight. Leigh is a person with many faces and many talents. In this interview, we will learn more about this fantastically talented Monty Python fan.

Akiko: Leigh, what do you think makes you love computer animation?

Leigh: I think the thing that I really love about it all is what most people who do it love: the ability to create your own worlds (insert evil laughter here), and to populate them as you see fit. You basically become a sort of cyber god ruling over this domain that exists entirely within your workstation. I've always had an overactive imagination, so being able to immerse myself in my own created world is something that I absolutely love, and really thrive on. I'm also just a very creative person by my nature, so working in a field that allows you to make anything that you can think of is just really cool!

Akiko: Do you have specific projects that you think are your best work?

Leigh: Hmm, that's a tough one to answer because I'm really hard on myself. I'm the kind of person that really enjoys something while I'm working on it, but soon after finishing it I decide I hate it because I always feel like I could have done it better. But if I have to choose, I'd say that my latest character, Jack, is my favorite. After seeing "Pirates of the Caribbean" I was really inspired to make a seedy looking pirate, and so I did. I actually made him specifically for a tutorial for this magazine! I went to a lot of effort with his textures, spending an entire afternoon creating them and tweaking them until I was satisfied with the detail. Characters are definitely my favorite things to work on in 3D, and I think that Jack displays my current skill level quite nicely.

Akiko: You have become very well known for your talents in texturing. Could you tell us what you love about creating textures? How important do you feel textures are to computer animation?

Leigh: I was initially drawn to texturing a few years back because I love details. And being a texturing artist allows you to really get carried away with tiny details. I'll spend ages creating perfectly detailed fingerprint brushes in Photoshop just so that I can add a few fingerprints to a glass texture, and having the freedom to actually put so much effort into something so tiny is something I just love.

I think that texturing is very important for CG because it gives you the chance to create little visual stories, a history, for whatever you are texturing. A little scratch here, or a fleck or paint there, or a small scar somewhere can really help to create the sense that the character or object has been somewhere before, and in that sense it helps to create a sense of believability because having a past makes something more substantial and real.

Akiko: Can you tell us a bit about your role in online forums including CG Talk?

Leigh: CG Talk is the only forum that I actually help to run. I've been offered moderating positions on other forums, but CG Talk takes up most of my time, so I concentrate on it the most and visit other forums when I have a spare moment. My role on CG Talk is currently as the head administrator, where I'm basically in charge of the entire community front of the site. Ensuring that the forums are peaceful, and that people are getting the help they need is something I spend a lot of time on, and also helping with the organizing and maintaining of competitions like the CG Challenge that we do. I spend quite a few hours every single day with CG Talk issues. Basically what I love is the way you have all these thousands of other similar-minded people right there that you can talk to, and being able to help people to develop their skills, as well as to be inspired by all the amazing work out there are all things that make my days better.

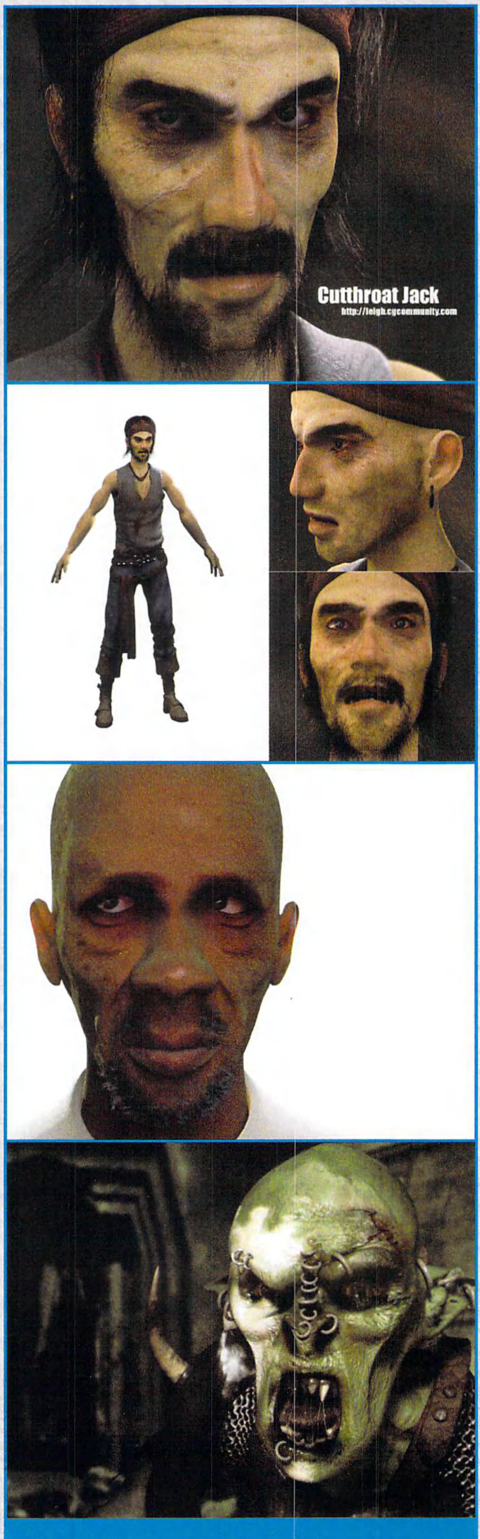
Akiko: Can you tell us a few interesting or funny stories about the online forums?

Leigh: Hmmm ... so much stuff happens everyday that it's hard to remember a lot of the funny things that have happened from time to time! Also, as a moderator, I see lots of funny things that most people don't see, but I won't tell those stories because it can embarrass some people, hehe. Something funny that happens from time to time is when people post images that are clearly photos, and claim that they are 3D models. Often it's done purely as a joke, but sometimes in the past we've had people who really have tried to repeatedly claim that a photo they've posted is a model of theirs, and those threads are always fun to watch. People do really silly things!

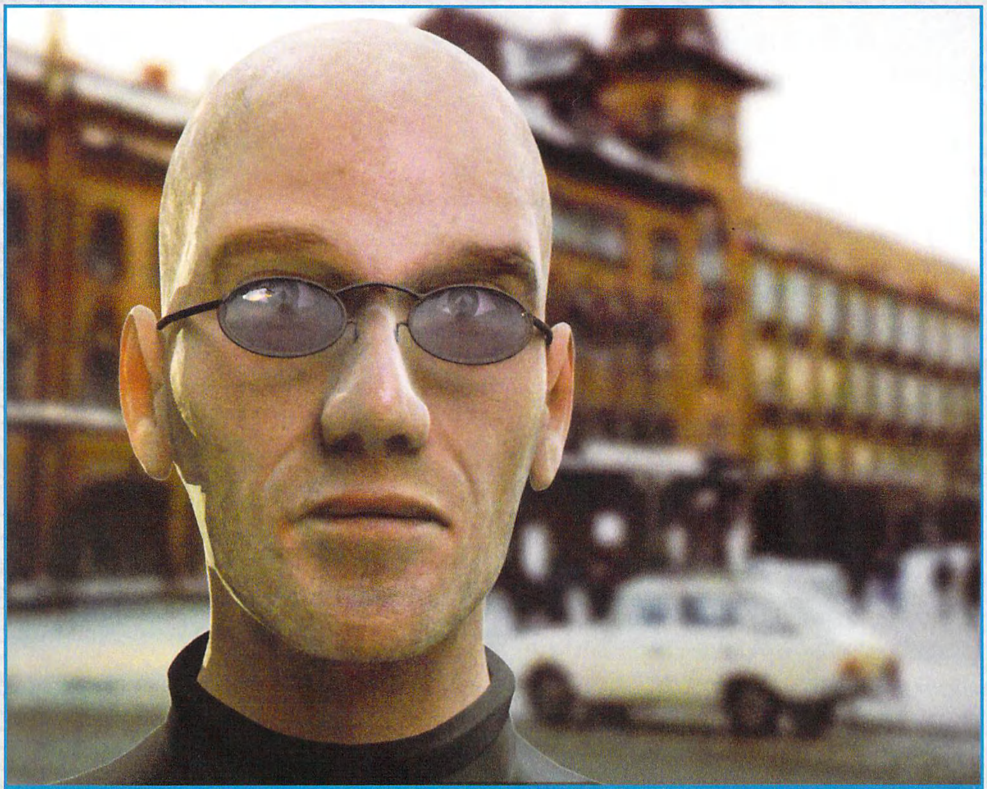
Something that is always great to see is when people post really awesome work and then get offered great jobs as a result. I've seen this happen a few times, and that's always a cool feeling. The most interesting thing of all is that if it wasn't for CG Talk, I wouldn't be writing this book, and I certainly wouldn't ever have been able to make a name for myself in the way that I have, because my entire international reputation and the contacts I've made have all originated from the forum.

Akiko: How do you feel about being asked to the Advisory Board of Keyframe Magazine and what is your role for the magazine?

Leigh: Well, I love being involved in anything that helps to bring something to the community, so being able to help out with anything that I can at Keyframe is great, and I was really honored to be asked. Obviously, I have a good idea of the sorts of things that people are wanting and needing to know about because I'm encountering it every single day on forums, so I have a good sense of the kind of content that people are wanting to find in a magazine like this. I remember that when I first started learning LightWave, the studio that I was working at had a couple of old issues of Keyframe lying around, and I learned quite a bit from reading through them, so being able to



SOME EXAMPLES OF LEIGH'S AMAZING TEXTURING AND CHARACTER WORK (FROM TOP TO BOTTOM): CUTTHROAT JACK (FEATURED IN KEYFRAME ISSUE 36'S TEXTURING TUTORIAL), JACK IN HIS VARIOUS FORMS, TA' ZIYAH, AND A PARTICULLARLY NASTY ORC.



LIFELIKE REALISM AND ATTENTION TO DETAIL ARE SHOWN AGAIN HERE WITH *HENRY*

help out with it is something really cool. Basically what I do is evaluate every issue and see how well it's catering to the needs of the community buying it. I also suggest articles that I feel would be a good addition in forthcoming issues. It's very much a feedback and suggestion role.

Akiko: What do you think people do not know about you?

Leigh: Many things! I think that a lot of people don't realize that I have a really great sense of humor though, and that I'm really laid back. My online presence, which is what most people know me from, is often very serious most of the time, yet that is the exact opposite of how I am in real life. I'm just a really down to earth person who laughs constantly and I have an extremely sick sense of humor. I think a lot of people also expect that all computer users are introverted people with no social lives, yet I'm an extraordinarily social person who goes out a lot and really likes to party. I like to spend as much time as I can away from my computer because I think that spending too much time in front of it can numb your social skills and make you lose touch with reality. So as much as I love what I do for a living, I think it's really important to get out and enjoy yourself as much as you can, especially when you're young like I am.

Something else that a lot of people don't know about me is that I have an identical twin sister, Tarryn. She's not involved in CG at all, but she'll probably be accompanying me to 3D Festival next year, so I think a lot of people will mix us up there!

Akiko: What is your funniest moment?

Leigh: Oh... there have been sooo many! As I've mentioned, I laugh a lot, and I laugh really easily at things. I also have a great ability to make people laugh, either by telling stories or by making a fool out of myself. I think the majority of my funniest moments are really not all that suitable for publication in a magazine though ;)

Akiko: What is your favorite film and how many times have you watched it?

Leigh: Hehehe, I think most people know this, and that is that I am absolutely and totally and utterly obsessed with "The Lord of the Rings" films. I've seen the first film, "The Fellowship of the Ring," almost 100 times now. I have lots of other old favorites though, including (of course) all the Monty Python films, as well as the "Star Wars" films, and a lot of films from the 80s. I'm one of those people that can watch any film I like over and over again until I know the entire script.

Akiko: Thanks for talking to us Leigh at Keyframe. You are a very interesting and animated personality. Please keep us up to date in the future.

Leigh: Thanks, Akiko! It was great having this chat, I certainly enjoyed it! I hope that I can do something exciting in the near future that I can tell you all about, hehehe.

AKIKO ASHLEY IS ONE OF THE FOUNDERS OF LUMINETIK 3D ANIMATION AND VFX STUDIO. AKIKO HAS WORKED IN THE ENTERTAINMENT AND TECHNOLOGY INDUSTRY FOR YEARS. SHE STARTED HER CAREER WRITING GAMES FOR NINTENDO IN JAPAN IN THE EARLY 80'S. AFTER SHE LEFT JAPAN SHE WORKED IN THE MUSIC INDUSTRY DISCOVERING NEW CREATIVE TALENT. SHE DECIDED TO START HER OWN TECHNOLOGY CONSULTING FIRM IN NEW YORK CITY IN 1994. AKIKO'S DIVERSE BACKGROUND WAS A BIG ASSET TO THE LUMINETIK TEAM. AKIKO JOINED LUMINETIK IN THE YEAR 1999. AKIKO WROTE LUMINETIK'S BUSINESS PLAN, MARKETING & PR STRATEGIES AND BUILT THE COMPANY'S TECHNOLOGY ALLIANCES. AKIKO IS AN EXECUTIVE PRODUCER ON SUCH RECENT PROJECTS AS VFX WORK ON THE CASTLEROCK/WARNER BROS. MOVIE "TWO WEEKS NOTICE," FOUR COMMERCIALS FOR ARM AND HAMMER FEATURING NEW YORK YANKEE JASON GIAMBI, AND CGI WORK FOR NATIONAL GEOGRAPHIC ON "SNAKE WRANGLERS." LUMINETIK'S VISION IS TO BE A ONE STOP PRODUCTION SOLUTION, AKIKO IS CURRENTLY BUILDING THE MUSIC DIVISION OF THE COMPANY WITH PARTNER COLIN GIBBENS. LUMINETIK WAS ONE OF THE CO-SPONSORS OF NYDV EXPO AT MADISON SQUARE GARDEN IN 2003 AND PRODUCED THE COMMERCIAL FOR MIND SHARE VENTURES. FOR MORE INFORMATION ABOUT LUMINETIK, PLEASE GO TO WWW.LUMINETIK.COM.

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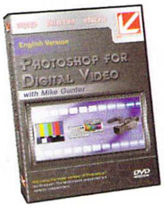

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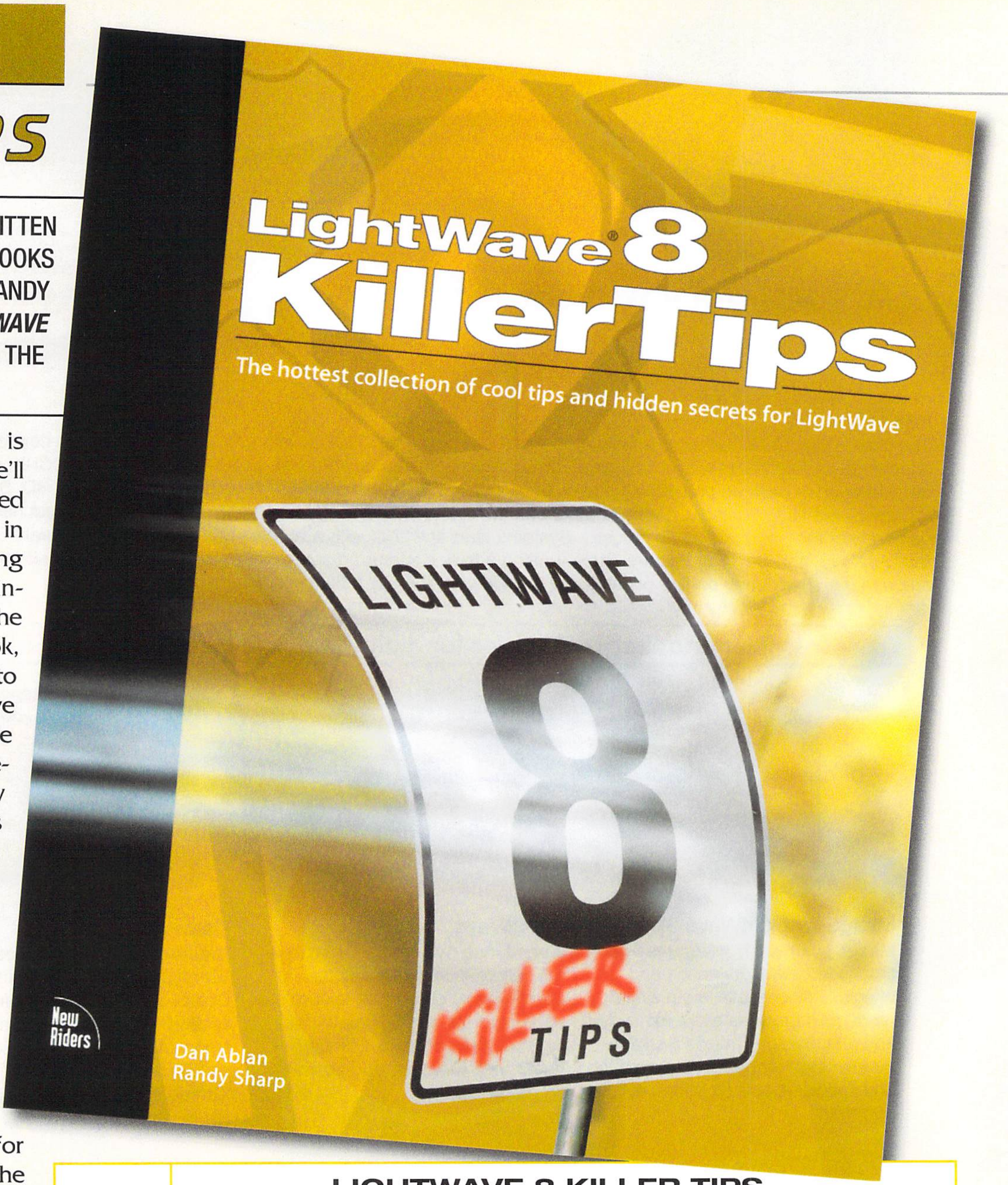
KILLER TIPS

KEYFRAME'S EDITOR-IN-CHIEF HAS WRITTEN SOME OF THE MOST COMPREHENSIVE BOOKS ON LIGHTWAVE. NOW ALONG WITH RANDY SHARP, HE'S DONE IT AGAIN WITH *LIGHTWAVE 8 KILLER TIPS*, AND OUR READERS GET THE FIRST PEEK AND SOME GREAT TIPS.

A new version of LightWave is upon us, and this spring, we'll also start seeing a new breed of LightWave books. They come in many shapes and sizes, unlike anything we've seen before. Our Editor-in-Chief, Dan Ablan, will be releasing the defacto-standard LightWave book, "Inside LightWave 8," as a follow up to his previous three, "Inside LightWave 7," "Inside LightWave 6," and "Inside LightWave 3D." But Dan has also created another book, one of the first new books published on LightWave this year. "LightWave 8 Killer Tips" follows the widely popular series created by New Riders Publishing and Photoshop Guru Scott Kelby. Dan has teamed up with Digital Domain resident modeler and animator Randy Sharp to create this handy guide chock-full of Killer Tips. Here's your first look!

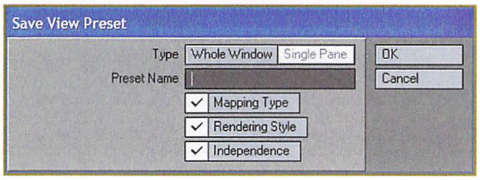
The LightWave 8 Killer Tips book is unlike any other book ever done for LightWave. Imagine going through the big thick manuals and pulling out just the cool tips…the "ah-ha" features and tricks that not only help your workflow, but get you excited about working with the program. These tips are more than just keyboard shortcuts, and cover everything from modeling, to texturing, to rendering. Another cool feature about "LightWave 8 Killer Tips" is that it's an inexpensive book, and not too thick, which means you can throw it in your bag and browse through it at lunch, on the train, on the …. Well, you get the idea. It's a handy reference book that you can quickly use as each tip is either a half or full page! Quick, easy tips without a lot of reading. How cool is that? At right is the table of contents, and then a few tips from the book for you to try out right away.



CHAPTER	**LIGHTWAVE 8 KILLER TIPS** Table of Contents by Dan Ablan & Randy Sharp	
1	**DEMYSTIFYING THE BUTTONS**	*Underneath the Secrets of LightWave 8*
2	**MAKING IT YOUR OWN**	*Customizing the interfaces*
3	**FEED YOUR EGO**	*Modeler tips for control freaks*
4	**EMBRACE YOUR INNER DESIRE**	*Modeling tips for the rest of us*
5	**AND GOD SAID…**	*Let there be lighting tips*
6	**KEEP MOVING ON**	*Motion tips for movers and shakers*
7	**WHAT GETS UNDER YOUR SKIN?**	*Skeletal Deformation Tips*
8	**BEAUTY IS ONLY SKIN DEEP**	*Surface and Texture Tips*
9	**GET OUT. JUST GET OUT!**	*Rendering and saving tips.*
10	**TRICKY DICK**	*Presidential Size Tips*

WHAT TO DO ABOUT THOSE PESKY NUMBER KEYS?

LightWave is cool in the fact that you can easily customize many parameters in both Modeler and Layout. And if you're like most users, you often need to switch between a wireframe view to a smooth shaded, to a sketch view. This happens frequently in Modeler as you work to get close to a model for the necessary details, while also trying to get a glimpse of the entire thing. So hop on into Modeler and setup any viewport the way you like, such as smooth shaded, wireframe shade, or whatever. Make sure your mouse is in that particular view, then hold the Ctrl key and press, say, the 5 key on the numeric keypad on your keyboard. A "save view preset" panel will pop up, allowing you to set a name and save the parameters you like. You can setup different numeric values for wireframe, smooth shaded, and the rest, and access them just by the push of a button. Just remember what viewport style is assigned to which numeric key!


Save View Preset

Type: Whole Window | Single Pane

Preset Name:

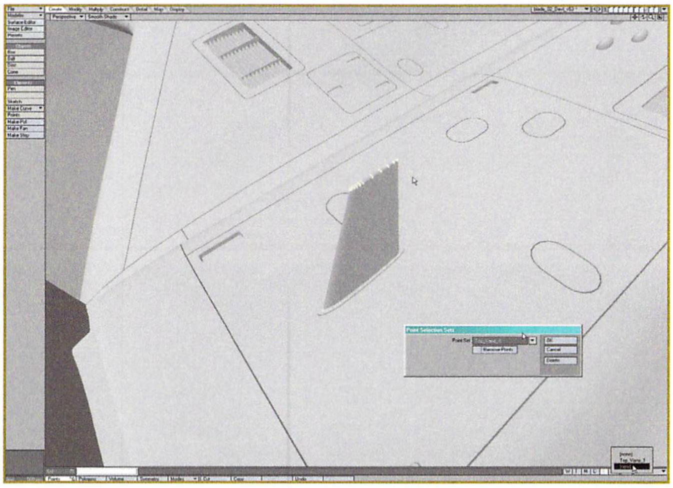
☑ Mapping Type

☑ Rendering Style

☑ Independence

SETS, SELECTION SETS, YES!

As you know, selecting by parts and surfaces is a great time saver. New to LightWave 8 is the Points Selection Set interface button. In the Lower-right corner of the interface you will see a couple of new buttons next to the usually "W," "T," "M" (that's weight, texture, and morph – respectively). The one we are interested in is the "S" button. Select some points, click on the "S" and then select "new" from the menu directly to the right. When the "Point Selection Sets" window opens, enter a descriptive name and click "OK." That's it! To access the selection set, use the "Point Statistics" window; the bottom of the window will list the name of your sets – select the one you want and click the "+" sign and the points are selected!

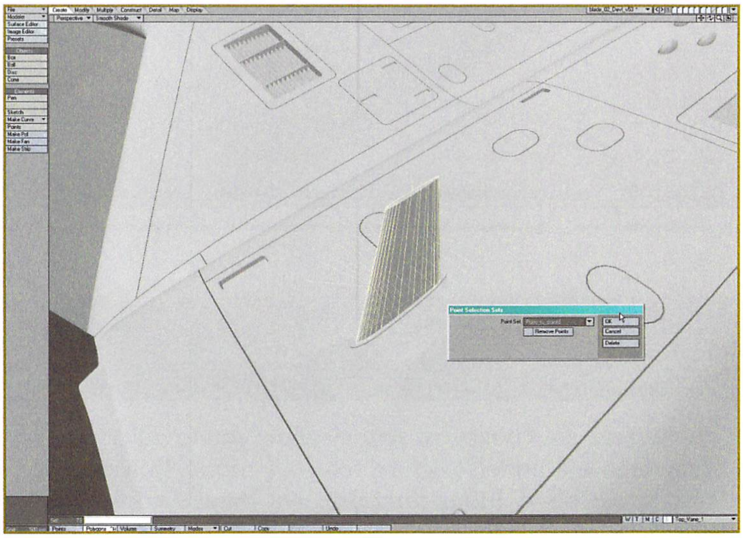


POLYS AS POINTS? YOU'RE NOT MAKING SENSE!

Ever had a group of polygons selected and thought to yourself,

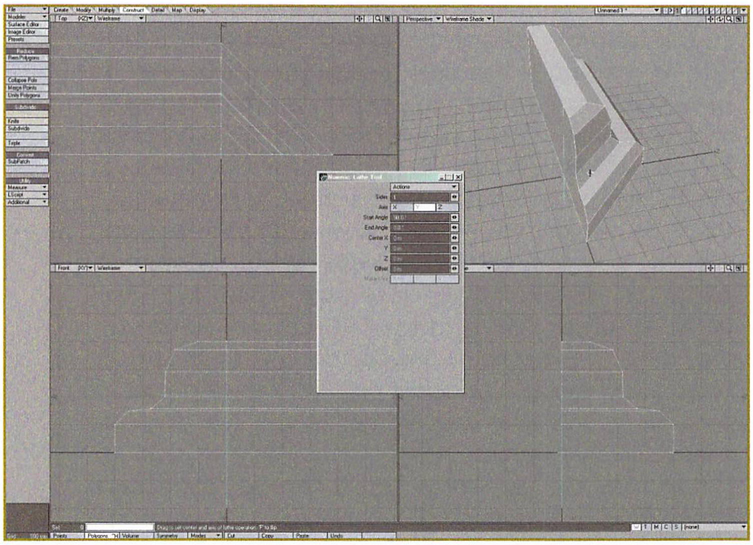
"Self, I wish I had the ability to have the points on the selected polygon selected!"?

Well, now you can! With the polygons selected, define a selection set, treating it like they were points, and guess what? When you go to the "Point Statistics" window and select the selection set name, the points will be selected! So not only do you get your polygon selection converted to points – you get the added bonus of having it a selection set too! At no additional cost! You don't even have to watch a late night infomercial to get it! What a deal!

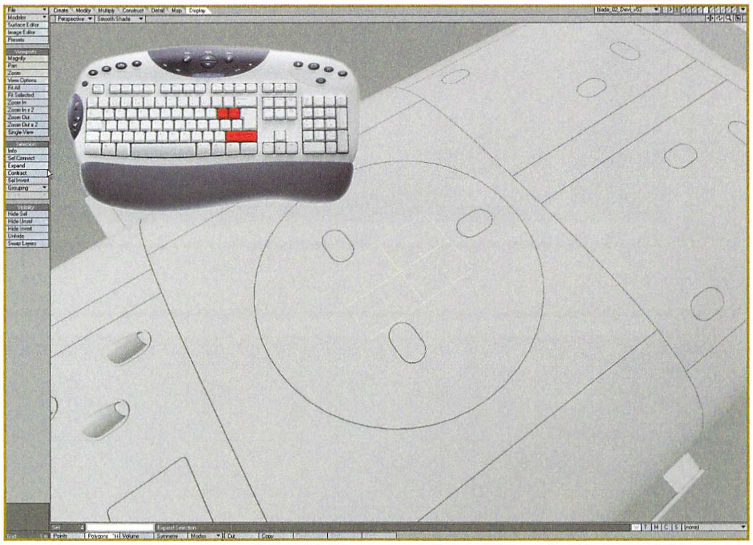


JUST AROUND THE CORNER

If you want to take a shape and make a nice 45 degree corner out of it, it can be kind of a pain. But, there is actually a very easy way: The "Lathe Tool." Yes, one normally thinks of the "Lathe Tool" as something for making a revolved surface, but you can use it to make corners as well! Select the profile of what you want to define the shape and activate the tool by selecting "Lathe" under the "Extend" heading on the "Multiply" tab. Activate the Numeric Panel and change the "Sides" to 1 (one). Then change the "Start Angle" and "End Angle" to be 90 degrees apart. Ta Da! You have a nice corner! Easy as pie. (You can also use this to do fancy rounded corners by increasing the Sides number. By the way, who ever said making pie was easy!?)



THE EXPANDING AND CONTRACTING UNIVERSE



Sometimes it is not easy to get the selection set that you want just by selecting polygons or points by hand. An easy way to "grow" or "shrink" a selection is to use the "Expand" (} key) and "Contract" ({ key) selection modifiers under the "Selection" heading on the "Display" tab. If you have polys or points selected, using the "Expand" modifer will grow the selection to include the adjacent points or polys next to your original set. The "Contract" modifier will do the opposite. These tools do not work on our Universe though, which is a good thing, as I am sure someone would try to contract the Universe back to a singularity! By the same token, you can use the new Select Loop option under the View tab. You'll find many new ways to select in LightWave 8!

SKELEGONS, SCHMELEGONS!

Skelegons are cool because they allow you to quickly and easily create a bone structure for your model in Modeler. Sure, great news (note sarcasm). But what's cool about keeping Skelegons in your model is that you can split them up and edit them as if they were Polygons. Well, hold your water my friend, you can now do this in LightWave 8 Layout! Go to the Setup tab in Layout after selecting the desired bone, and then click Bone Split. Bam! Break that bone, baby! What? You didn't want to break that bone? Either undo, or better yet, use the Bone Fuse tool.

QUICK AGING TIP

Years ago, way back in the stone age, back when LightWave was on the Amiga computer, there was a feature that needed to be used to accomplish some everyday tasks. That feature is now long forgotten, but still very useful! Have you ever wanted to make a surface age? You know, have a wooden chair turn from new to old, or a young woman change into an old lady. How? It's so easy! Bring your model into LightWave Modeler. Make sure that this object has a surface name such as "surface one" and copy this object and paste it down in a new layer. Give the copy a new name, and make any adjustments to it, perhaps add bags to the eyes if it's an old woman. Be sure to name each layer, or at least remember which model is which! Save out the object. In Layout, load the object. LightWave remembers that the single object has layers, so you only need to load the single object. Select layer one, and press the P key to open the object properties panel. In the Deform tab, select Layer 2 of your object as the Morph Target, making sure that the Current Object is Layer 1. Then, click the Morph Surfaces check box, also in the Deform tab. Next, click the E button to open the Graph Editor for Morph Target, and create a keyframe at frame 60 with a value of 100%. Close the Graph Editor and then click the Render tab of the Object Properties panel. The last setting you need is to make Layer 2 invisible. Drag the Object Dissolve to 100% for Layer 2. With any necessary surfacing and lighting in place, render your scene and watch your object change!

RIGS! RIGS!

No, we're not talking about Mel Gibson's character in the Leathal Weapon movies. We're talking about animation and character rigs. Get 'em while they're hot! Have you ever made the perfect rig for a character and then realized you have to do it all over again for another character? Or worse, you need to replace the root character with your new one and then adjust all the bones? Well, forget that nonsense. Just use the Import and Export bone rig features found under the Setup tab.

For more great tips pick up a copy of ***Lightwave 8 Killer Tips*** by Dan Ablan. Available from New Riders publishing.

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UV TEXTURING AND SURFACING IN LIGHTWAVE 7.5 AND PHOTOSHOP 7

BY GREGORY GLEZAKOS

OLYMPIC
AIRBUS A320-200
Gregory "T.Rex" Glezakos
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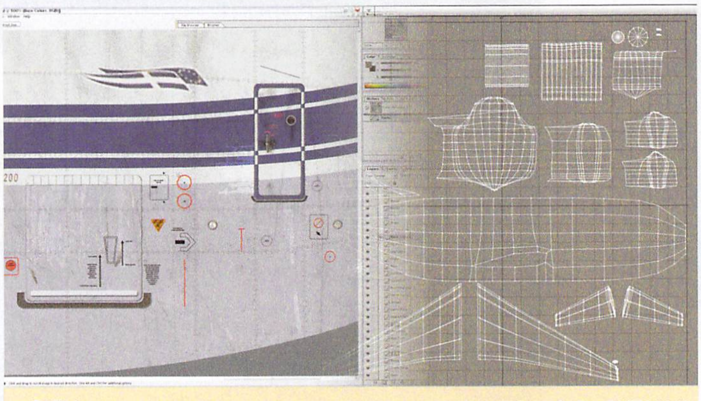
INTRODUCTION

This is a four-part tutorial for creating a realistic airliner using LightWave and Photoshop. The above image is a test render from my aircraft, which was used for a domestic feature film's shot. For more info, follow this URL: http://www.cgtalk.com/showtqhread.php?s=&threadid=85367 and check on page 2 for the movie shot...

The first two parts are about creating the airplane's UV maps for the textures. The other parts are about painting various realistic textures in Photoshop and applying them in LightWave (Pic 1).

BEFORE WE START

First of all, download this file (160kb) from the link below, so you can follow along with the tutorial: http://users.otenet.gr/~darkjedi/Olympic.zip. It's the model, a grid image and some free lscripts.



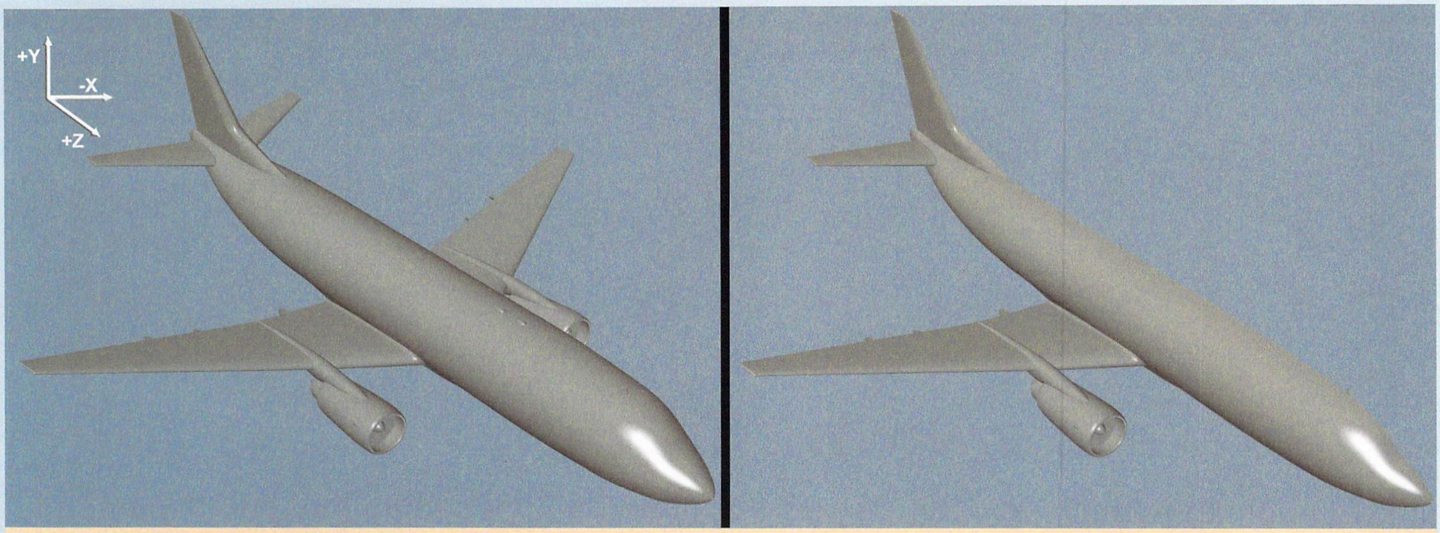
PIC 1—TEXTURES FROM PHOTOSHOP AND WIRE FRAMES FROM LIGHTWAVE

We are going to use a very useful free lscript from m2e Studios (http://www.m2estudios.com) called "Great Box." It creates a perfect bounding box surrounding our model, with the same dimensions on all sides, and can help us make correct planar UV maps.

Also, we are going to use a "select edge loop" type of plug-in to select outer edge points or polygons of our model. It's the "Point Belt Selector." Though it was free, I can't recall its origins. Of course, there are a lot of similar plug-ins around the net, so you can use any one you like.

Another set of plug-ins are the "Mirror Tools" from Terry Ford (http://www.terryf.dsl.pipex.com). Among them you'll find the "Delete Left/Right," which automatically deletes either side of an X-symmetrical created object. We don't need them for this tutorial, but they might come in handy for you, as I used them a lot when modeling this airplane.

Let's fire up Modeler and load the "Olympic.lwo" object. For this plane, we want a medium to long shot for the final render, so that we don't have to model all things like passenger doors, access panels, wheel cabinets or windows. We'll cheat those with textures. We've finished our model without any UV map created along the way. Since this is an airplane, it's totally symmetrical along the X-axis, so we can delete half of a side of it, as in Pic2. Later, when we are done with the UVs, we'll mirror it back to its final state.



PIC 2–OUR AIRPLANE MODEL WITHOUT ANY UV MAP. (R) THE PLANE SPLIT DIRECTLY ALONG ITS X-AXIS

We need to unwrap our model parts in a way that:
1st. UV mapping is mainly planar, with some cylindrical maps.
2nd. Painting textures in Photoshop are logical and easy as possible.

To simplify our workflow and paint job in Photoshop, it's better to create a single UV map for the whole airplane. But, first we'll create a distinct UV map for each layer, and later merge all in a single big UV map.

First thing to do is to break the model in parts and areas that need UV mapping and spread them across different layers, which I already have done for you, as you see from the downloaded model (Pic3).

CREATING THE BOUNDING CAGE

Select the first empty layer, in our case layer 9, and then select all the other layers (1 to 8) that have an airplane's part. Run the "Great Box" lscript. It will create a bounding box in layer 9.

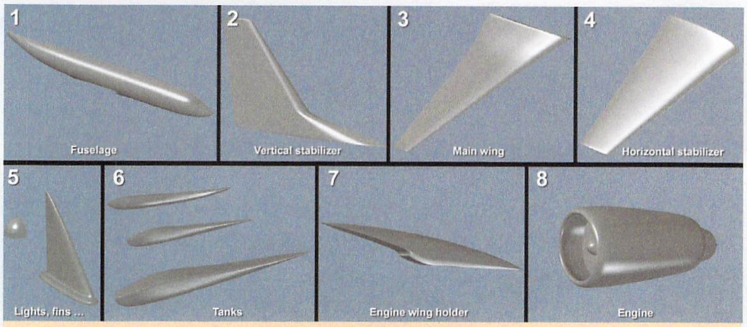
Carefully, follow the steps below:
1. Select layer 9 as the only foreground layer.
2. Select all polygons.
3. Hit B, default key for Bevel.
4. Hit N, default key for Numeric panel and set default settings.
5. Press Return key (not numeric Enter).
6. Press Space Bar to drop the bevel tool.
7. Press Del to delete the selected polygons.
8. Hit M, default key for Merge, and then Return to merge all points.

If you did this right, you are going to end up having a bounding cage assembled of 2-point polygons, like in Pic4, instead of a bounding box. This was not a necessary step, but it will be easier to see our model during UV mapping and not have that bounding box all over it, but only a cage with the right proportions.

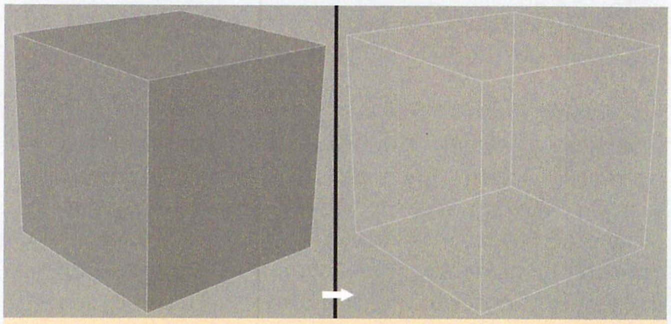
CREATING A UV MAP FOR THE FUSELAGE

We'll start with layer 1, the main fuselage of the aircraft. We are going to create UVs for only one side of the aircraft and if we are to show both sides, we only have to create a mirrored texture in Photoshop for the other side and of course, a different surface name for it.

The procedure we are going to use for the fuselage's UVs, I call it "UV-through-Morph," is described here http://www.menithings.com/main.php?action=how&how_id=7&manual=1 by Aristomenis Tsirbas. With this technique, we can create fully unwrapped objects for planar UV mapping, which is the best mapping method, with minimum distorted areas. Switch to a two-window mode, having a wireframe-shade perspective

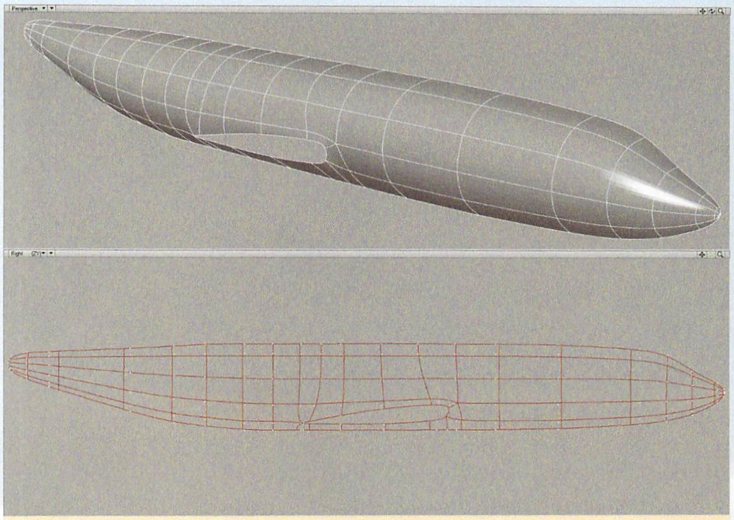


PIC 3–OUR AIRPLANE MODEL SEPARATED INTO INDIVIDUAL PARTS



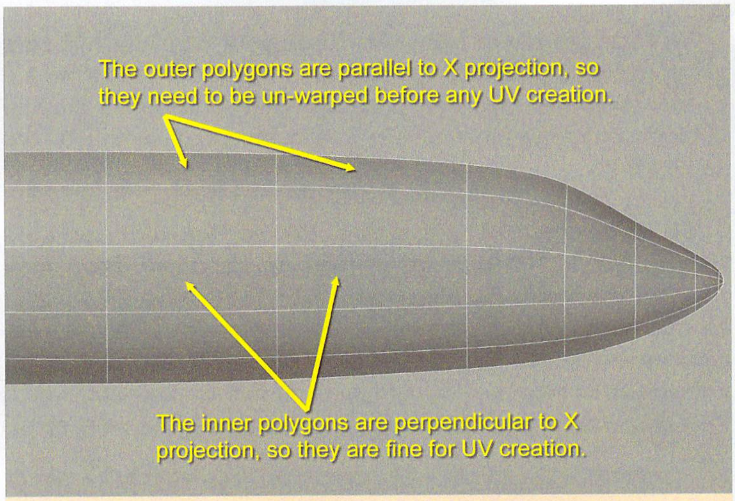
PIC 4–A BOUNDING CAGE ASSEMBLED OF 2-POINT POLYGONS

view on top and a wireframe right side view on bottom, (Pic5) and get rid of any grid. Make sure you have independent move and zoom for both views.



PIC 5–TWO WINDOW VIEW

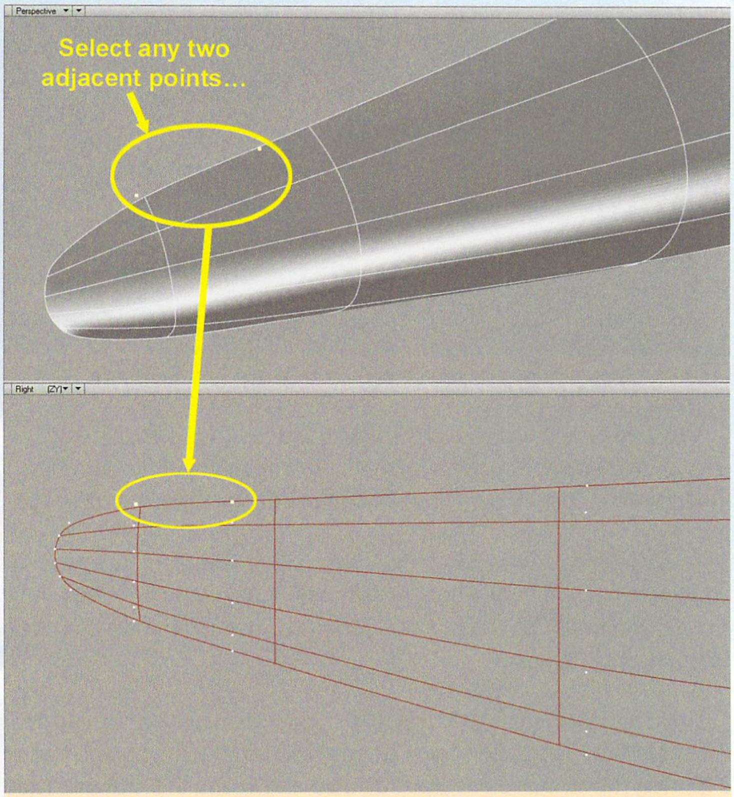
We will make a planar UV map for the fuselage, because it's the easiest map to paint compared to cylindrical and have the minimum possible distortion. The fuselage is rather a simple object, so what we have to do is take notice of how the inner polygons are laid out. We'll "unwrap" our object trying to match the outer polygons to the proportions of the inner ones, but also trying not to alter the overall topology of the object's points (Pic6).


The outer polygons are parallel to X projection, so they need to be un-warped before any UV creation.
The inner polygons are perpendicular to X projection, so they are fine for UV creation.

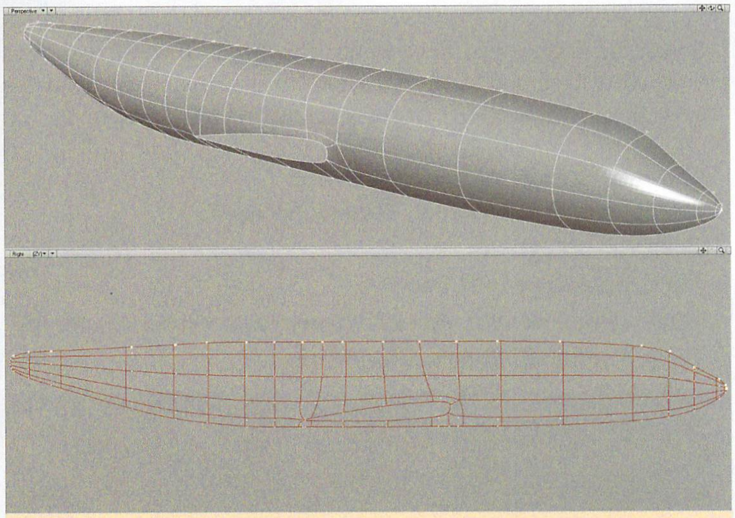
PIC 6–POLYGON PROPORTIONS SHOULD BE MATCHED

Working always on layer 1, create a morph target for our fuselage by clicking the small M button, on the lower right corner of Modeler, then click the drop-down menu next to it that says "(base)," select "(new)," and on the panel that pops up, write in the name "Fuselage_M." Click "OK" with the rest of the settings as default. Now, working on that morph, we'll edit the points in order to create a distortion free planar map using Modeler tools, like move, rotate, scale, dragnet, magnet etc.

Here's where the Point Belt Selector script will come in handy. On the perspective view, select any two adjacent points of the outer edge of the fuselage (Pic7) and run the Point Belt Selector script. You've just selected all the outer points that belong to a quad polygon, as in Pic8.

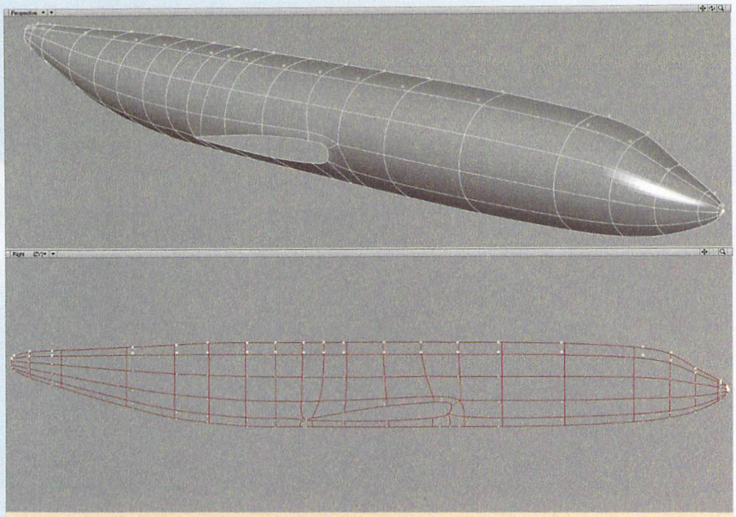

Select any two adjacent points...

PIC 7–SELECT TWO ADJACENT POINTS AND RUN POINT BELT SELECTOR SCRIPT



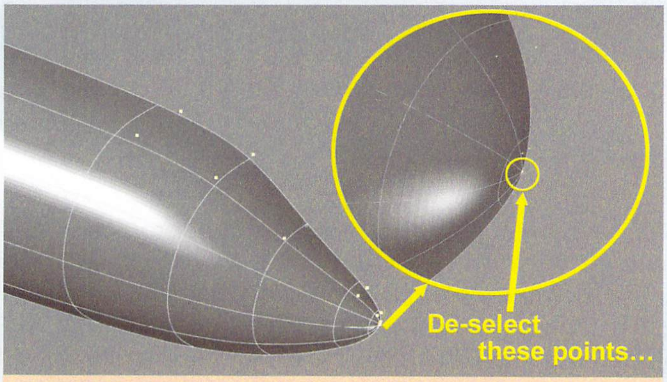
PIC 8–ALL OUTER POINTS ON A QUAD POLYGON SELECTED

In order to unwrap the object properly and not ruin the adjacent relations of the points, most of the time we'll try to work in large point selections. So, press "Shift" and "]" to add the next point row to the selected points. We have selected two point rows now (Pic9).



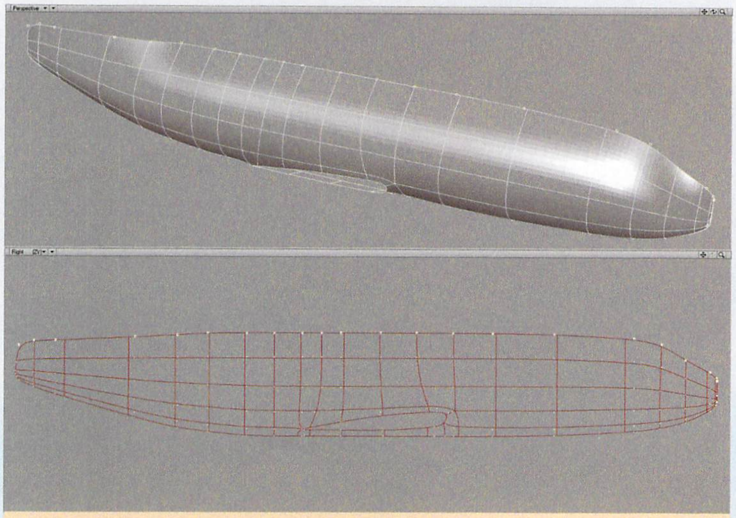
PIC 9–TWO POINT ROWS SELECTED

Checking from a close-up view, make sure you deselect the center nose points, since we don't want to move them (Pic10).



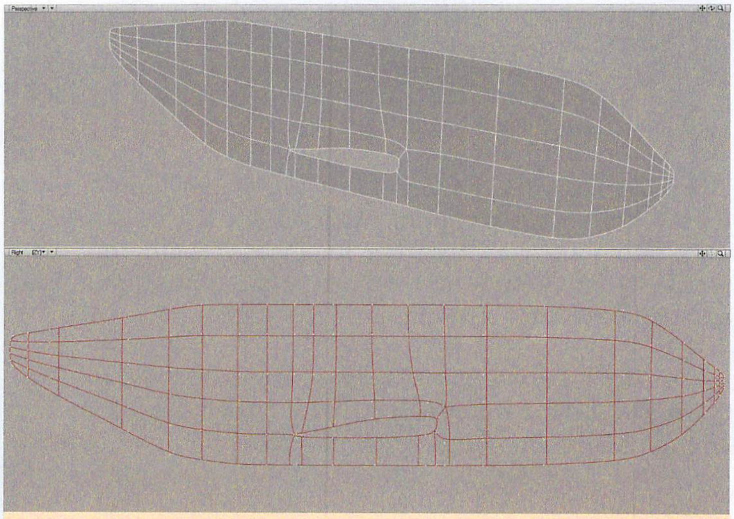
PIC 10–BE SURE TO DESELECT THE CENTER NOSE POINTS

On the right side view, while holding "Ctrl" to lock movement in one axis, move the selected points upwards until you make the proportions of the second outer polygon row similar to the third polygon row, at the center of the fuselage. Then, press "Shift" and "[" to deselect the second point row, moving the same way as before the remaining row and making sure that the proportions of the outer polygon row are similar to the other inner rows, like in Pic11.



PIC 11–MAKE THE PROPORTIONS OF THE SECOND ROW SIMILAR TO THE THIRD

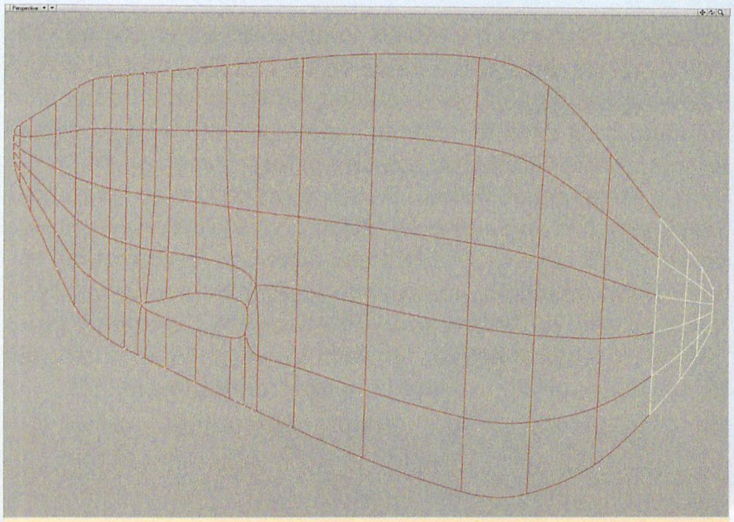
Keep in mind that the goal is to make the outer polygons as similar as the ones at the inner of the fuselage, but ALWAYS following the original point topology of the object. At any time we can check how the overall topology looks at the original state by single-clicking on the morph map "Fuselage_M" at the Vertex Maps panel. Follow the same procedure for the under fuselage points and all the rest points. For the tail and front side points, you'll have to re-edit them, after you finish moving the large point selections, in order to resemble the original point topology (Pic12). When you are finished with the editing, press "Ctrl" + "v" (default key for Set Point Value) to flatten the object on the X-axis and you'll end up with a model, like in Pic12.



PIC 12–THE FLATTENED X-AXIS MODEL

Okay, now it's time to actually create our first UV map out of this morph map we've just made. By default, when we create a UV map for an object, LightWave spreads that map to fill as much UV area as possible. Since we have separated our aircraft into eight different layers, we want their UVs to have similar proportions to their original size and to each other, not having them stretched to fit the whole UV space. In order to do that, every time we are about to create a UV map for a given layer, we'll also select layer 9 as a foreground layer, which is the bounding cage we created earlier. This way, we make sure that each UV map will have the correct proportions.

For the aircraft nose we'll create a different UV map later, so select the three polygon columns belonging to the nose and press "-" to hide them (Pic13).

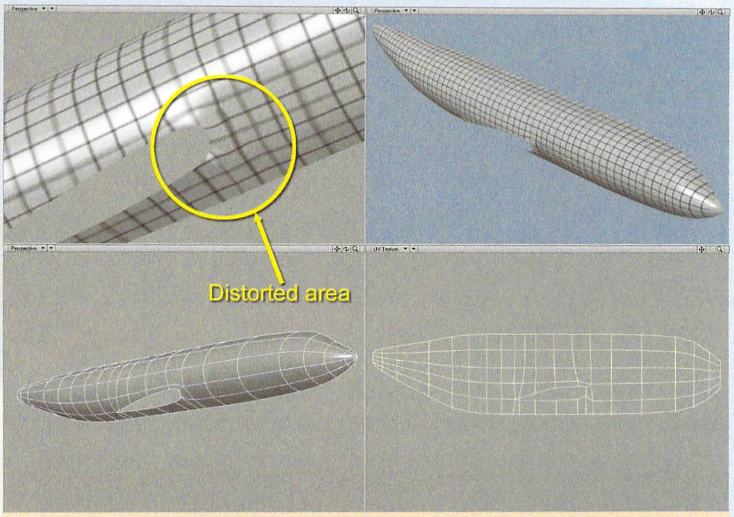


PIC 13–HIDE THE THREE POLYGONS ON THE NOSE

Holding Shift, select layers 1 and 9, click the small T button on the lower right corner of Modeler, and create a new UV map. Name the map "Fuselage_T." Choose "Planar" on X-axis for the map type and leave the rest of the settings as default, as in Pic14 (Bottom of Page).

Press "q" to assign an "Airplane" surface to the fuselage. Open the Surface Editor and click the color texture button to add an image map. Choose UV for projection type, use the "Fuselage_T" we've just created and for an image use the "Lines.bmp." This grid image can test the continuity of the UV map and help to spot distorted areas.

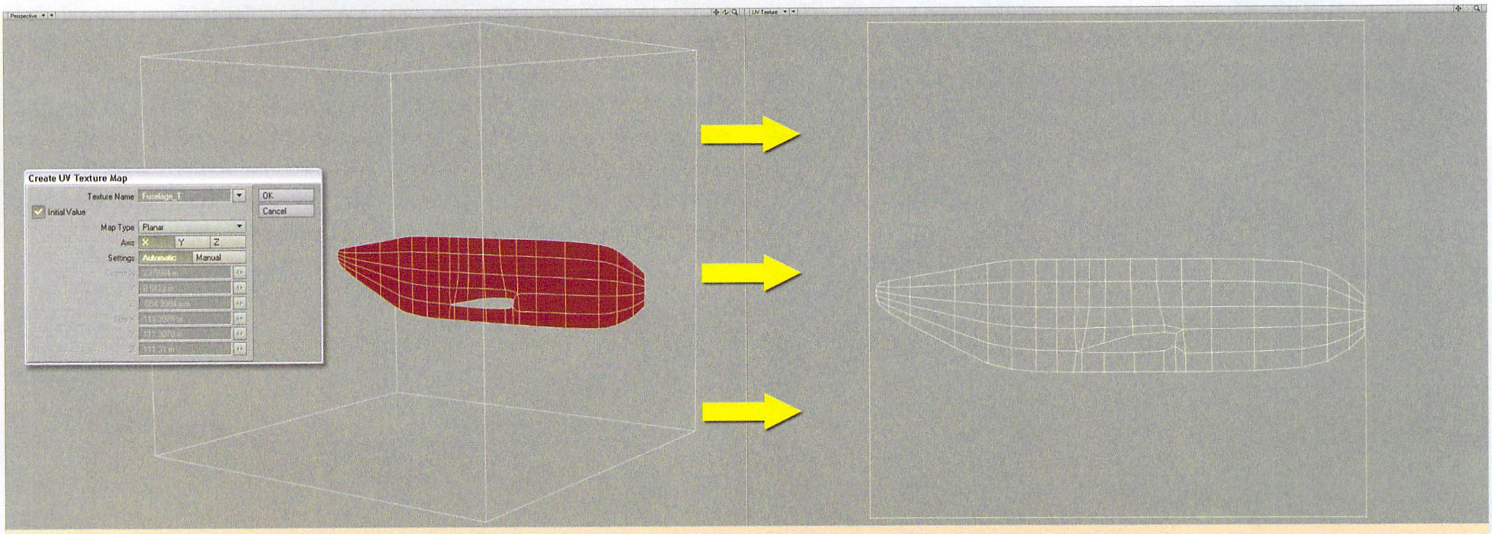
As we see from Pic15, most of the UVs work well, but there are some minor distorted areas. This was expected since we are working with subdivision surfaces and our object has points that belong to more than four polygons, also known as "edge loops." We could leave it like this, because it's really a minor distortion and probably with careful texture paint and camera planning wouldn't be seen, but the goal here is a distortion-free map, so let's see if we can minimize those distortions.



PIC 15–MINOR DISTORTION OCCURS AT EDGE LOOPS

SUB-DIVS AND UV MAPS

We have two options to eliminate the distortion. The first one is what I did when I was working for the film shot, which is to go back one step, just before you create the UV map, and convert the sub-div fuselage to polygons. You'll get a 99.9% distorted-free map, but also, if you want a smooth object for close-ups and nice highlights, ugly high polygon counts, as you can see from Pic16 (Next Page).



Create UV Texture Map

Texture Name: Fuselage_T

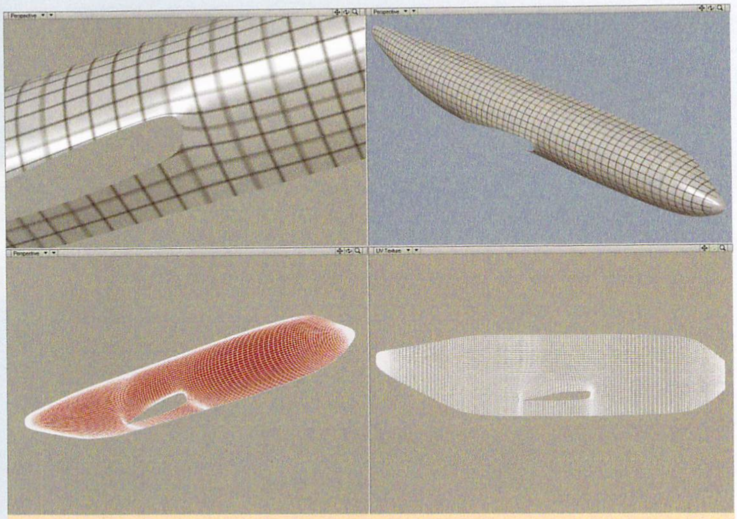
☑ Initial Value

Map Type: Planar

Axis: X

Settings: Automatic

PIC 14–CREATE A NEW UV MAP NAMED "FUSELAGE_T"

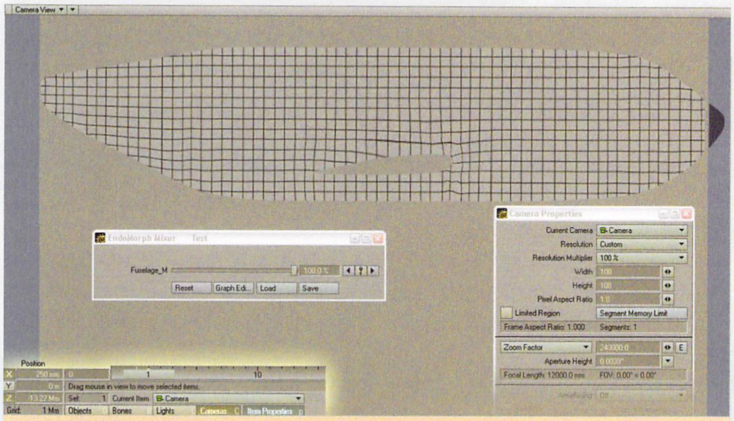


PIC 16–UGLY HIGH POLYGON COUNTS IS ONE OPTION FOR NO DISTORTION

The second option – and the one we are going to use for this tutorial – is using front projection mapping in Layout to actually distort the final textures to conform the UVs we've created. I like to call this technique "Front Projection UVs." This technique allows us to work all the way with sub-divisions and only requires a near-perfect UV map using the "UV-through-Morph" technique.

(Jackie Daniel, who invented this technique, has written a very helpful tutorial that describes it thoroughly. You can read more about it here: http://www.jackydaniel.com/pages/Tutorial.htm)

This technique requires the finished textures to work, but since we haven't done them yet, we are going to do a quick test just to see how it works and to setup everything for when we finish the textures. So, copy layer 1 to a new object and save it with the name "Test.lwo." Open Layout and load the "Test.lwo." Go to the Properties panel for that object and set subdivision order to Last. Then, go to the Deform tab and add the Morph Mixer displacement plug-in. Double click on it to open its properties and then close the Object's Properties panel.



EndoMorph Mixer Test

Fuselage_M 100.0 %

Camera Properties

Current Camera: Camera

Resolution: Custom

Resolution Multiplier: 100 %

Width: 100

Height: 100

Pixel Aspect Ratio: 1.0

☐ Limited Region

Frame Aspect Ratio: 1.000

Segments: 1

Zoom Factor: 240000.0

Aperture Height: 0.0039"

Focal Length: 12000.0 mm

FOV: 0.00° × 0.00°

Drag mouse in view to move selected items.

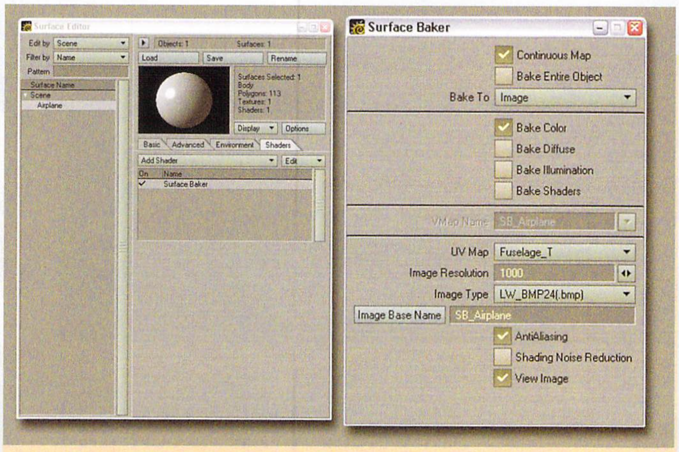
Current Item: Camera

PIC 17–SET THE MORPH MIXER PANEL TO 100% AND SET A KEYFRAME

Now, rotate the "Test" 90 degrees in the Heading. Position the Camera to X=250 mm, Y=0 m and Z=-13.22 Mm! Open the Camera's properties panel and set the Width and Height to 100 pixels. Set the Pixel Aspect Ration to 1. Then, set the Zoom Factor to 240.000! This way we make the camera "orthographic" with zero lens distortion. If you don't see the object, open the Display properties (default key "d") and set the "Fix Near Clip Distance" to 100 mm. Go to frame 1 and drag the slider in the fuselage's Morph Mixer panel to 100% and set a keyframe, as in Pic17.

That's all the camera setup we had to do. Here's how we'll "distort" our texture in order to counterbalance the distortion from our sub-div model. Open the Surface Editor and go to the Color Texture channel of our "Airplane" surface. Change the projection type of the image map from "UV" to "Front" and click on Use Texture. Go to the Shaders tab and add the Surface Baker plug-in. We'll use it to bake our front-projected texture on a new image, using the UV map we've created in Modeler.

Open its properties panel and deselect "Bake entire object." Right now, it doesn't make any difference, but later when we'll have the entire airplane, we wouldn't like that on. Bake To should be set to Image. Leave only the Bake Color option, since we're using only the color channel. UV Map should be our "Fuselage_T" and Image Resolution for this test should be 1000. Select bmp24 for Image Type and click on the Image Base name. Navigate to a directory you like and click on Save. Activate Anti-Aliasing and View Image (Pic18).



Surface Editor

Edit by: Scene

Filter by: Name

Objects: 1

Surfaces: 1

Surfaces Selected: 1
Body
Polygons: 113
Textures: 1
Shaders: 1

On	Name
✓	Surface Baker

Surface Baker

☑ Continuous Map

☐ Bake Entire Object

Bake To: Image

☑ Bake Color

☐ Bake Diffuse

☐ Bake Illumination

☐ Bake Shaders

VMap Name: SB_Airplane

UV Map: Fuselage_T

Image Resolution: 1000

Image Type: LW_BMP24(.bmp)

Image Base Name: SB_Airplane

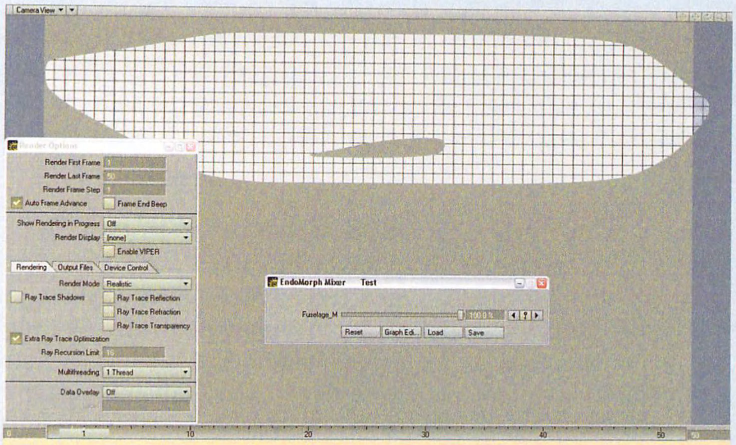
☑ AntiAliasing

☐ Shading Noise Reduction

☑ View Image

PIC 18–SURFACE BAKER SHOULD BE SET TO BAKE COLOR ONLY

On the Render options, set your Multithreading number to 1, because Surface Baker doesn't like more than one thread. Show Rendering in Progress should be off and Render Display should be set to "none" (Pic19).


Render Options

Render First Frame: 1

Render Last Frame: 50

Render Frame Step: 1

☑ Auto Frame Advance ☐ Frame End Beep

Show Rendering in Progress: Off

Render Display: (none)

☐ Enable VIPER

Rendering / Output Files / Device Control

Render Mode: Realistic

☐ Ray Trace Shadows ☐ Ray Trace Reflection ☐ Ray Trace Refraction ☐ Ray Trace Transparency

☑ Extra Ray Trace Optimization

Ray Recursion Limit: 16

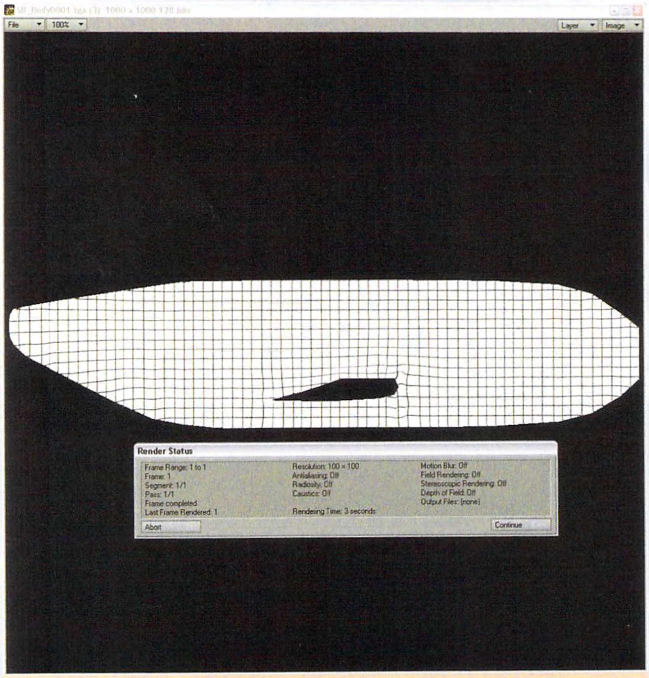
Multithreading: 1 Thread

Data Overlay: Off

EndoMorph Mixer Test

Fuselage_M: 100.0 %

PIC 19–RENDER DISPLAY SETTINGS


Render Status

Frame Range: 1 to 1

Frame: 1

Segment: 1/1

Pass: 1/1

Frame completed

Last Frame Rendered: 1

Resolution: 100 × 100

Antialiasing: Off

Radiosity: Off

Caustics: Off

Rendering Time: 3 seconds

Motion Blur: Off

Field Rendering: Off

Stereoscopic Rendering: Off

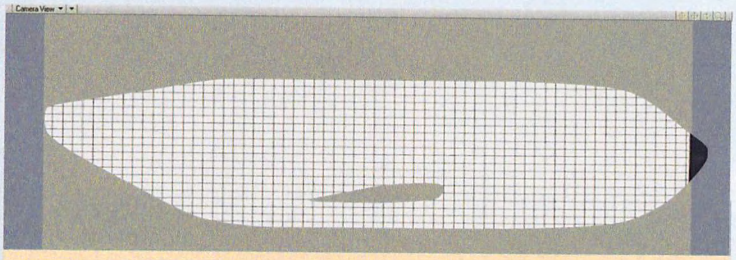
Depth of Field: Off

Output Files: (none)

PIC 20–RENDERING OF THE TEST IMAGE

Our only saving and viewing options should be from the Surface Baker settings. Hit F9 for a render. Click No on the pop-up window. Rendering for this test image on a 3GHz system took only three seconds (Pic20).

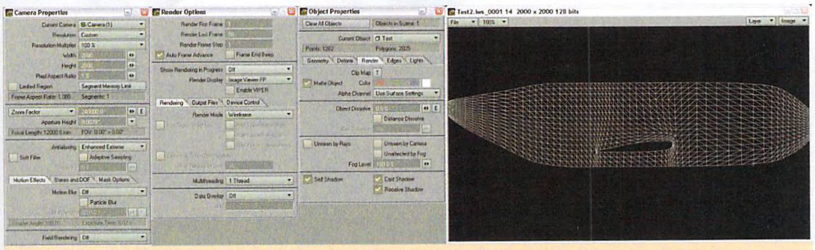
As you can see, our texture image looks severely distorted. But, that is what we wanted to do! Try this now. Open the Surface Editor and de-activate the Surface Baker plug-in in the Shaders tab. Go to the Basic tab and enter the Color channel's Texture. Once again, change the projection type to UV, and for an image load the newly baked "SB_Airplane0000.bmp." Click Use Texture and close all panels. Voila! Our distorted texture looks perfect on our model (Pic21).



PIC 21–THE DISTORTED TEXTURE LOOKS PERFECT ON THE MODEL

You can have a better view by adding a new camera. In frame 0, move it around the fuselage to check the texture from various angles. Hit F9 to render from any angle you want. You will not find any distortion on the texture.

To summarize, the "Front Projection UVs" technique helps us use sub-division surfaces and UVs with distortion-free texture results. The template image for painting the actual textures can't be a UV export from Modeler. It must be a print-screen from the Camera view in Layout at frame 1 or even better, a wireframe rendered image. For the latter, change the Width and Height camera properties to 2000 to get a decent size for the UV texture, and set Anti-Aliasing to a high setting, like "Enhanced Extreme." It's a simple wireframe render and won't take long. On the Render Options panel set the Render mode to "wireframe." Select "test.lwo," then Item Properties. Under the Render tab, set it as a Matte object with a full white color, so as to render an image similar to what we would get if we did a UV export from Modeler, like in Pic22.



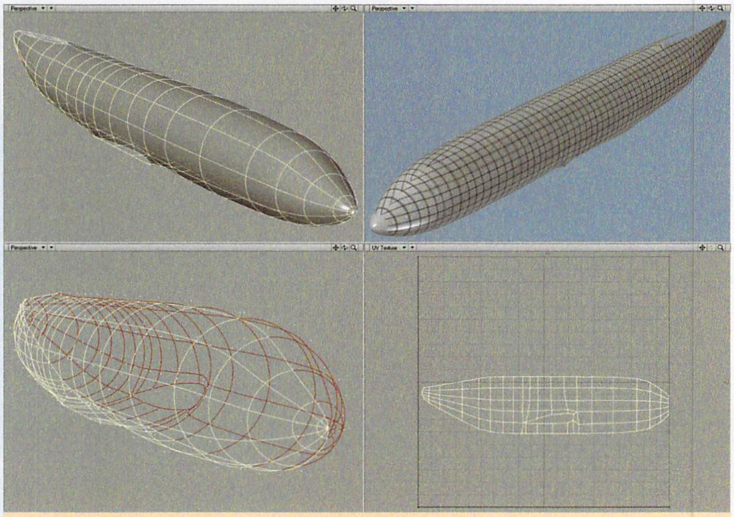
PIC 22–THE RENDERED IMAGE SIMILAR TO A UV EXPORT FROM MODELER

If we want a less dense result, we can change the Render Sub-patch level under the Geometry tab of the object's properties to smaller numbers. Zero will produce the same image as a UV export from Modeler, but with higher density we get better understanding of the curved areas.

So, we've done our UV map for the fuselage's body, have the template image to paint textures on and we have our layout scene to produce distortion-free textures. This last step will be used properly when we finish painting all the textures in Photoshop and of course, we'll be using the fuselage from our main object file and not from the test object we used for this test.

Let's go back in Modeler and finish our fuselage UVs. We still have to create UVs for the nose. Since we are done with the body's UVs, we can mirror the fuselage back to its full state.

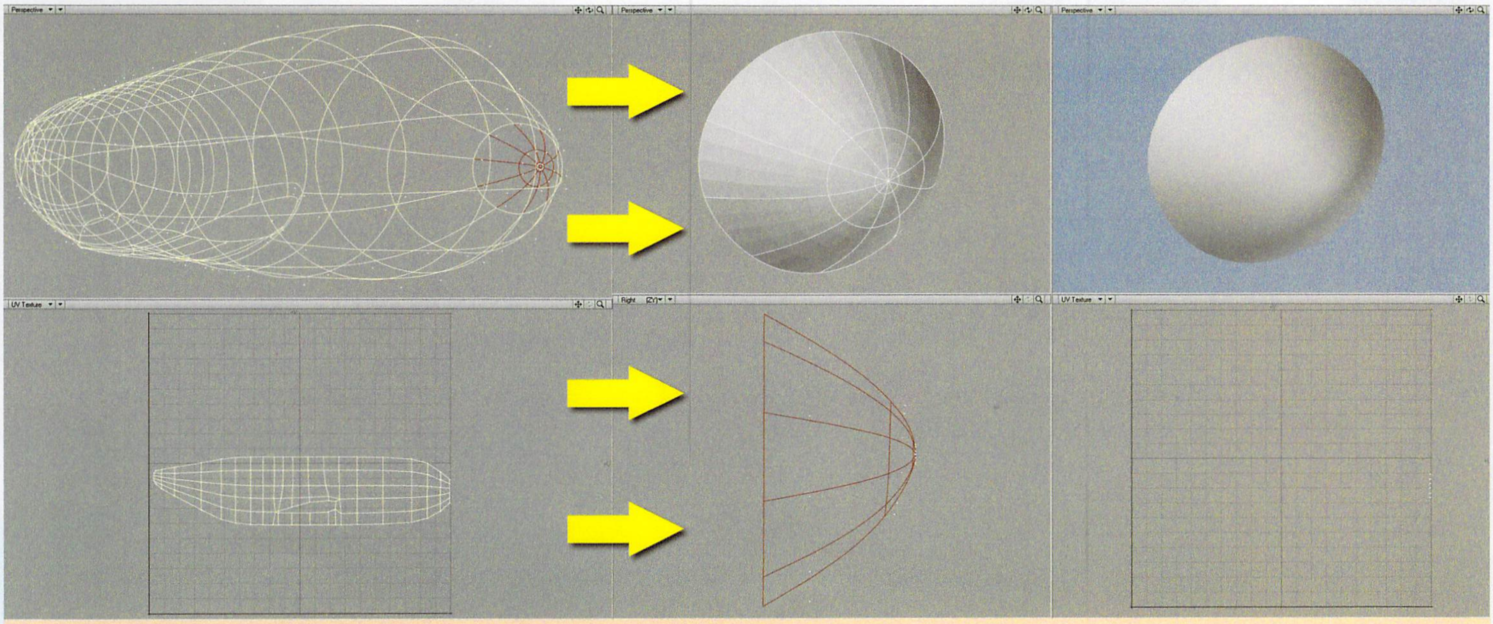
Working on layer 1, select all polygons. Press “Shift” and “v” (default key for Mirror), press “n,” then “Return,” and hit “Space.” We’ve just mirrored the fuselage at the X-axis, merging all points (Pic23).



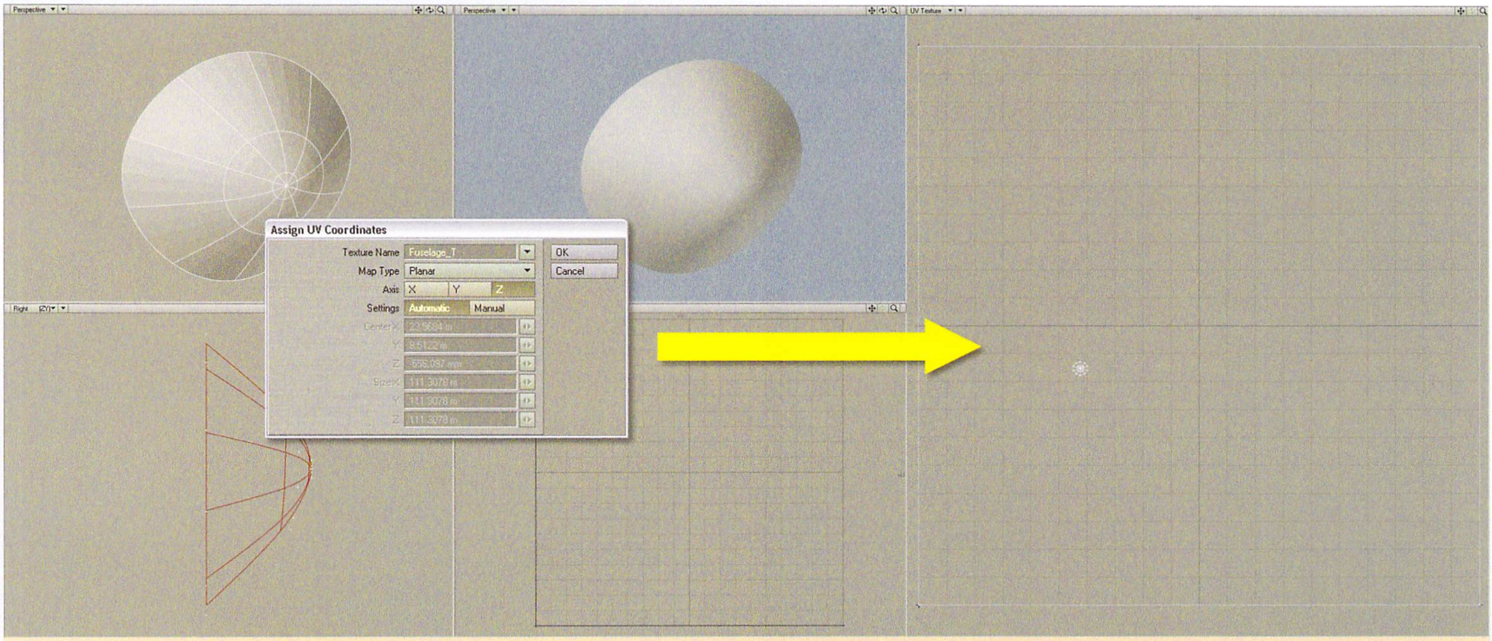
PIC 23—MIRRORED FUSELAGE AT THE X-AXIS

Now, it’s a good time to separate the two sides of the fuselage with different surface names. Select Invert All Polygons to select the other half side, press “q” and assign a surface with the name “Airplane Mirror.” At the Surface Editor, right-click on the “Airplane” surface and select Copy. Then paste it on the “Airplane Mirror” surface. These surfaces should always be identical, with only the textures different, so we can create correct decals and names if we are to show both sides in a future render.

Now let’s create the nose UVs. Deselect all polygons (if any) and lasso select all polygons at the UV Texture View, like in Pic24, and press “-” to hide them.



PIC 24—LASSO SELECT ALL POLYGONS AT THE UV TEXTURE VIEW



Assign UV Coordinates

Texture Name: Fuselage_T

Map Type: Planar

Axis: X Y Z (Z selected)

Settings: Automatic Manual (Automatic selected)

Center X: 23.5684 m

Y: 8.5122 m

Z: -556.097 mm

Size X: 111.3078 m

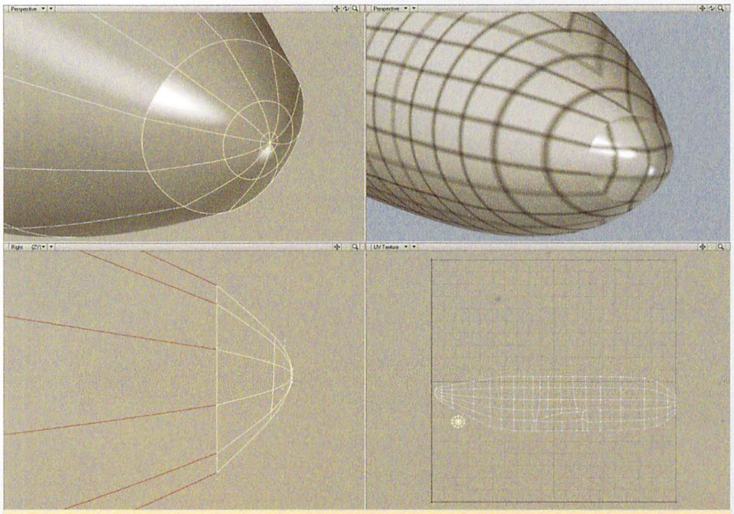
Y: 111.3078 m

Z: 111.3078 m

PIC 25–SETTINGS FOR MAKING THE NOSE CONE UV MAP

Press the "x" key to cut the nose polygons. Then press "-" to hide the remaining points. Immediately hit the "v" to paste back the nose polygons, which are now separated from the rest of the fuselage. Make sure you have no polygons or points selected. Select both 1 and 9 layers as foreground layers and at the Map tab under Texture, click on "Make UVs." On the Assign UV Coordinates window that opens, select "Fuselage_T" as Texture Name, Map type should be "Planar," Z-axis for projection and leave the rest of the settings at "Automatic." Click the OK button (Pic25).

Now, working only in layer 1, select all polygons first and then unhide all polygons. Move the selected nose polygons to an area away from the body's UVs and scale them with Selection pivot mode 200% in the UV Texture window only, like in Pic26. This is for making the size of the nose polygons UVs equal in size and proportions to the unwrapped polygons of the rest fuselage. Deselect all polygons and press "m" to merge back the nose to the rest of the body.



PIC 26–SIZE AND PROPORTION THE NOSE POLYGONS TO MATCH FUSELAGE

That's it! We are done with the fuselage's UVs. Now it's a good time to save with a new file name, just for back-up purposes. In the next issue, we'll complete the UV creation for all the other parts of the airplane, all in a single, nice and big UV map. Stay tuned and until next time you can e-mail me here darkjedi@otenet.gr, for any questions or suggestions you may have. Thank you all for your time and patience. I wish you all a happy and prosperous new 2004 year. 🟥

GREGORY GLEZAKOS (AKA "T.REX" TO HIS FRIENDS) IS AN EXPERIENCED 3D ARTIST WORKING PROFESSIONALLY FOR THE LAST 10 YEARS, EITHER AS A FREELANCER OR CONTRACTED TO MAJOR DOMESTIC PRODUCTION STUDIOS. WHEN BETWEEN JOBS, HE IS TEACHING LIGHTWAVE AND DIGITAL FUSION, EITHER TO STUDENTS OR BY HELPING ARTISTS IN VARIOUS VISUAL FX HOUSES MEET THEIR DEADLINES.

NewTek's Emmy–Winning 3D Application To Migrate to Apple's Xcode Development Environment Roadmap for LightWave 3D for Mac Platform Will Optimize Performance for OS X and G5 Processor.

San Francisco, California—January 6, 2004—NewTek, Inc., manufacturer of industry-leading 3D animation and video products, today announced a development roadmap for LightWave 3D. for the Mac platform that will optimize performance for the Mac OS X operating system and for the new G5 processors. NewTek's LightWave 3D combines a state-of-the-art photo-realistic renderer with intuitive and powerful modeling and animation tools, and is used worldwide as a complete 3D production solution for broadcast graphics, games, print, web, and visual effects for film and television. The roadmap will migrate LightWave 3D to Apple's Xcode development environment and transition the application from Carbon to OS X native.

"We're very excited by the capabilities Apple offers developers in the Xcode environment and within OS X," said Andrew Cross, NewTek's Senior Vice President of Engineering. "We're more committed than ever to taking the best possible advantage of the outstanding capabilities of Apple's latest technogies for our LightWave users. Apple's Xcode, clearly designed to streamline the developer's workflow, will allow us to do that in a fast and flexible environment."

The performance gains possible with the migration to Xcode and becoming an OS X native application may be especially important for the host of new features and enhancements coming up in LightWave 3D version 8.0. Optimizations which have provided faster rendering and faster inverse and forward kinematics are expected to see some additional increase due to the changeover, for example. Calculation intensive features such as LightWave's new hardbody dynamics and extended softbody dynamics and particle systems will all benefit, as well. Becoming an OS X native application will also allow NewTek to customize LightWave more specifically for the unique strengths of the Mac and achieve the best possible performance in speed and workflow, while increasing the flexibility in the interface for the user.

"I enjoy the control and flexibility that LightWave offers, and I find that over time, LightWave has expanded my capabilities as an artist and opened new venues for my work," said Joe Zeff, freelance illustrator whose work has appeared in Time and Newsweek, as well many other major publications. "NewTek's LightWave 3D was the first professional 3D application to come to OS X, and it's great to see NewTek continue their commitment to keeping LightWave's leadership position in 3D for Mac users with this migration to Xcode."

Of the top four 3D applications by marketshare, only LightWave 3D provides the Mac platform with the complete top-tier application. At the 2003 Emmy Awards, LightWave garnered NewTek's second Emmy, in recognition of the impact of LightWave in the field of visual effects for television. NewTek is previewing LightWave 3D v. 8.0 for press and users at the MacWorld Expo, in a hospitality suite at the San Francisco Marriot, 55 Fourth Street, San Francisco, CA 94103.

LIGHTWAVE 3D OVERVIEW:

- World-class rendering
- Fast, versatile Modeler
- Powerful scripting language
- Character Animation tools
- Particle Effects
- Expressions
- Numeric entry and expressions in input fields
- Unlimited points and polygons per object
- Unlimited images
- Unlimited surfaces
- Easy import of Illustrator. data
- Easy integration with other effects production tools.

LIGHTWAVE 3D VERSION 8.0 INCLUDES:

- Improved workflow in Layout and Modeler
- Rigid Body Dynamics
- Improved Soft Body Dynamics
- Faster IK, FK
- Bone Dynamics
- More powerful and flexible character animation controls and tools
- Improved character setup workflow
- New Particle System Tools
- Animatable UV coordinates
- Improvements to LScript(TM) scripting language and to the API

PRICING AND AVAILABILITY

From now until LightWave 3D version 8.0 ships, Mac designers and graphic artists in the USA and Canada who own qualifying products may purchase LightWave 3D [7.5] for $795US, a savings of $800US off the MSRP of $1595US. This special offer is available at NewTek authorized resellers, Apple Stores, and Ingram resellers. Mac OS X platform with USB port required. For more information on this special offer, see http://www.newtek.com/print. Worldwide, LightWave 3D [7.5] for Mac and Windows platforms is available now at authorized NewTek resellers for a suggested retail price of $1595US. For more information on the items offered, to locate a reseller, and to purchase direct from NewTek, visit: http://www.newtek.com or call NewTek Sales at 1-800-368-5441, overseas callers dial +1-210-370-8000.

ABOUT NEWTEK, INC.

With headquarters in San Antonio, Texas, NewTek is a leading provider of full-featured video editing, animation and special effects tools including VT[3](TM), and LightWave 3D, winner of the 2003 Primetime Emmy Engineering Award. NewTek launched the desktop video revolution in 1990 with the release of the legendary Video Toaster. The company's products are used worldwide on projects ranging from home video to feature film. Recent television and film projects using NewTek software include "The Last Samurai," "Threat Matrix," "Children of Dune," "Firefly," "Taken," "Smallville," "Star Trek: Enterprise," "Star Trek 10: Nemesis," "The Matrix Reloaded," "Collateral Damage," "The League of Extraordinary Gentlemen," "Agent Cody Banks," "Daredevil," "Spy Kids II," "We Were Soldiers," "Panic Room," "Hart's War," "Driven," "A.I.," Oscar.-nominated "Jimmy Neutron: Boy Genius," "Final Fantasy," "Blackhawk Down," T"he Time Machine" and "Star Trek: The Motion Picture" – Director's Edition DVD. Recent game titles include Doom III, Unreal Tournament, Serious Sam for XBox, Age of Mythology, Civilization III, Dead to Rights, Baldur's Gate II, EverQuest and Escape From Monkey Island. Website: http://www.newtek.com

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The International 3D Awards returns for its second year, with the ceremony to be held on 5 May 2004 at the 3D Festival in Copenhagen, Denmark. The 2nd Annual International 3D Awards is now calling for entries.

AWARDS WILL BE GIVEN IN THE FOLLOWING CATEGORIES:

Feature Film Visual Effects
Animated Feature Film
Television Visual Effects • Commercials
Music Videos • Short Films
Logos and Idents • 3D Game of the Year
Game Cinematics (non-interactive)
Technological Innovation
Design Visualization / Industrial Design
Architectural Visualization (Animation)
Architectural Visualization (Still)
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ABOUT THE 3D AWARDS

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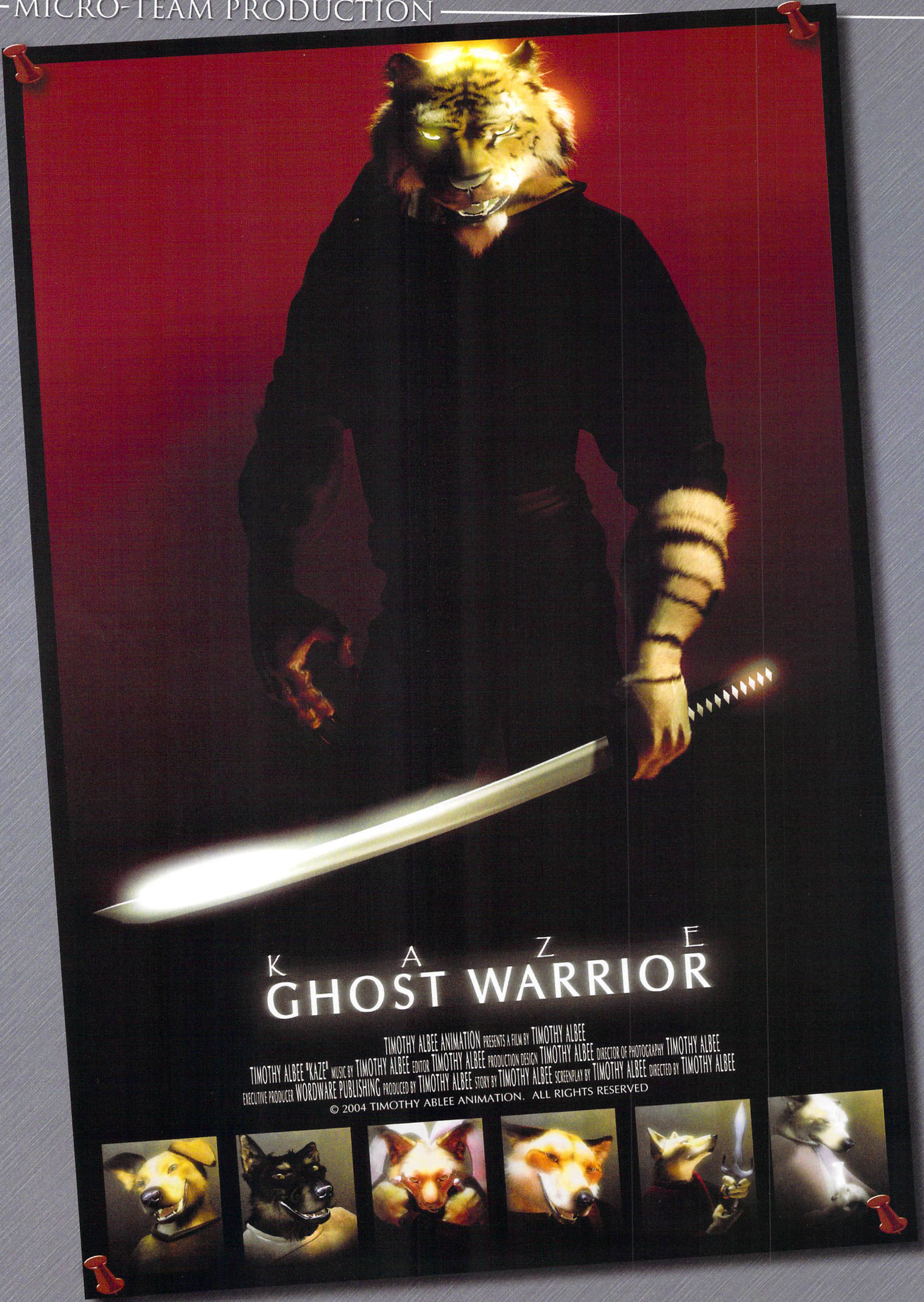
KAZE
GHOST WARRIOR
TIMOTHY ALBEE ANIMATION PRESENTS A FILM BY TIMOTHY ALBEE
TIMOTHY ALBEE "KAZE" MUSIC BY TIMOTHY ALBEE EDITOR TIMOTHY ALBEE PRODUCTION DESIGN TIMOTHY ALBEE DIRECTOR OF PHOTOGRAPHY TIMOTHY ALBEE
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CHANGING THE FACE OF FILMMAKING: "MICRO-TEAM" PRODUCTION

BY TIMOTHY ALBEE

WITH THE LATEST ADVANCES IN TECHNOLOGY, YOU CAN MAKE THE FILM THAT YOU HAVE ALWAYS WANTED TO MAKE...AND WITHOUT HAVING TO SELL YOUR SOUL, COMPROMISE YOUR IDEA OR HIT THE LOTTERY TO GET IT DONE. THE CONCEPT OF MICRO-TEAM PRODUCTION IS CHANGING THE WAY MOVIES GET MADE.

THEN:

Way back in the early days, shortly after 3D graphics programs had first made their appearance on "consumer-level" equipment (circa 1993), something special happened. An animator named Dale Myers created a brilliant short film by the name of "Robo Jr." This film was beautifully animated with all the finesse of a Disney or Warner classic. Its story was well-written and poetically put forth with the prowess of pantomime.

That "Robo Jr." was an engaging and heartwarming work of filmmaking and truly was suitable for all ages made it a rarity among films (short or otherwise). That "Robo Jr." was done entirely by one person on Amiga "home" computers solidified it as a work as groundbreaking as Fritz Von Lang's "Metropolis."

Meeting and talking with Dale Myers at Detroit area Amiga User's Group meetings was inspirational. He was charismatic and insightful, and you walked away from meetings with him knowing that what he'd done was no fluke; it was something that you, yourself could do if you 1) learned what needed learning, and 2) did what needed doing.

THE POSTER FOR *KAZE, GHOST WARRIOR* (AT LEFT). THE CREDIT LINES SHOW WHAT ONE MOTIVATED INDIVIDUAL CAN DO.

SIX FRAMES FROM THE MOVIE (NEXT TWO PAGES). COMBINING STATE OF THE ART CGI AND GREAT STORYTELLING IS NO LONGER THE SOLE PROPERTY OF THE LARGE STUDIOS.

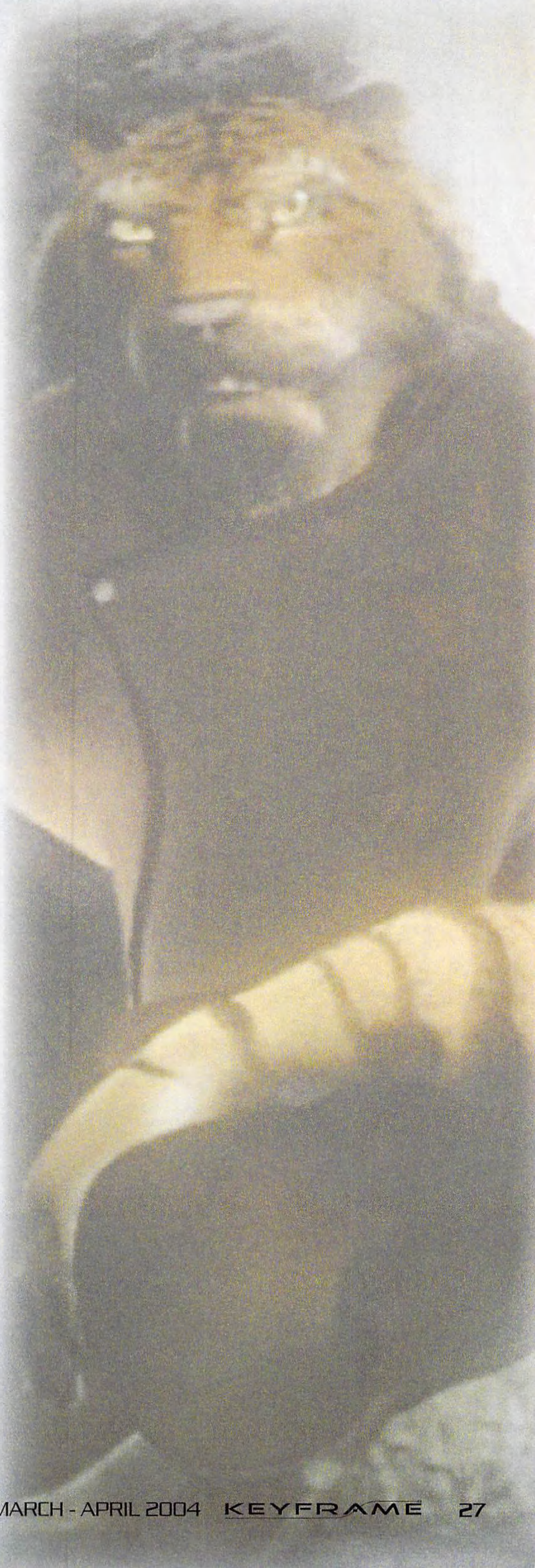
NOW:

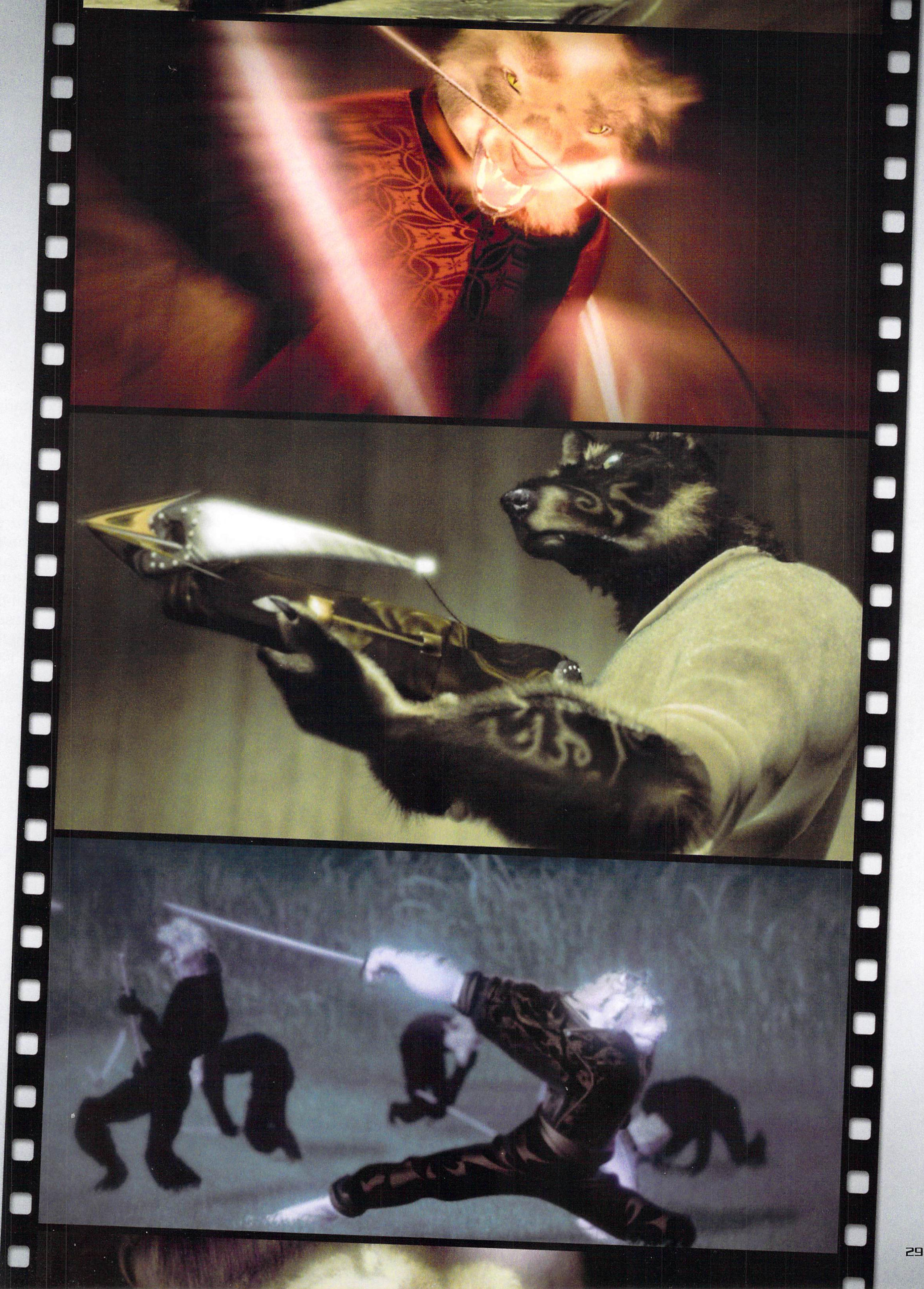
Regardless of whether you're a multi-decade Industry veteran or a Jr. High student just getting your hands on 3D software, you've got a story in your head/heart you've always wanted to see told. It's the same with all of us. It's one of the biggest reasons any of us got into this business in the first place!

The old "Studio" way of doing things meant that most of us would never get the chance to tell our own stories, "Baseball-Traded" from one production to another like so much cattle. The best any of us could hope for was to be hired into a place that was doing a production that we'd enjoy working on.

Computer hardware and software have evolved to a point where one person alone can now do what would have required hundreds of highly-skilled Artists, even a few years ago. Old, pedantic ways of working are being replaced with streamlined methodologies that maximize the output-per-mouse-click ratio. Programs like LightWave and Digital Fusion, though not marketed as forcibly as some other packages, lead the way with their throughput intuitiveness, render quality and speed, complete toolsets and the ability to give you exactly what you need without being forced to re-program the software yourself.

In theory, using the right tools, small teams of dedicated artists could produce work at a level of quality equal-to-or-higher than that of the most respected "big-time" animation Studios, and do so in roughly the same amount of time. Implemented properly, this





"Micro-Team" studio-model could result in budgets for feature-length CGI animated films dropping from their current level of $100M to between $5M and $20M.

However, until a feature-quality film over twenty-minutes long is actually produced in this method, though most in The Industry would regard this theory as possible, most would also regard it as highly improbable.

"KAZE, GHOST WARRIOR"

"Kaze, Ghost Warrior" is a 22-minute short film that matches the best in writing and lighting, acting and action of any feature film, live-action or animation. It is being done in part to prove beyond the shadow of any doubt that there is a shift continuing in the world of Feature Animation. It is a shift that began in the late 1980s with the creation of the Video Toaster and LightWave 3D. This shift was perpetuated in 1993 by Dale Myers' "Robo Jr." This shift continues today, putting the power of filmmaking into the hands of the Dreamers who do what needs to be done.

"Kaze, Ghost Warrior" is a proof-of-concept that this shift in the model of filmmaking is completely viable for production, regardless of the resources available to a project. It is being done by one person, alone, on two consumer-end PC computers, in six months of production, in a one-room cabin on the very edge of the Alaskan frontier.

You don't need to be in Hollywood to make things happen, you don't have to lobotomize scripts to get them made! You don't need to "sell-your-soul" to get distribution!

Anyone can learn what they need to learn to do the jobs that need to get done, and once those skills have been acquired, they can be focused into the creation of the stories that you, yourself, have always wanted to be told.

You don't need to be independently wealthy, or live impoverished in a "Walden"-like cabin-in-the-woods to find the time to make your Dream happen. If you do at least one thing toward the fulfillment of your goal, each and every day, you will eventually reach it. (And you'll find that immersing yourself in your story is hundreds of times more rewarding than anything that is done simply to pass the time.)

I've always been an "out-of-the-box" kind of thinker. It doesn't come from anything more special than the desire to get things done right the first time and to not do anything that isn't right. This "Micro-Team" model of making CGI features is little more than doing just that.

The "Micro-Team" model of production may strike fear into the management teams of "Big Studios," and they may do whatever they can to preserve their accustomed ways of life. Or, they may embrace it, funding ten CGI Features for the "old-school" cost of one.

But the true power is not in the hands of the "Goliaths," it is in the hands of the directors and Dreamers who believe in the truths of their own vision. Already, the prominent film-festivals are accepting works on DVD (whereas many Academy "qualifier" festivals required the work to be screened on film as recently as last year). Even the Academy of Motion Picture Arts and Sciences itself is allowing qualified works to be submitted on digital formats for Oscars® nomination!

It is not enough to simply theorize that this kind of filmmaking can be done, nor is it sufficient to let a work created in this method stand enigmatically as a self-referential proof. Knowledge is at its best use when it empowers others dedicated toward positive goals! When everyone is at a high level of skill, the most important thing anyone has to offer is his/her own unique point of view!

To this end, I've written-down each and every step of the filmic process that created "Kaze, Ghost Warrior" as it happened. Solutions and Insights are preserved fresh with the enthusiasm of their discoveries in the text of "CGI Filmmaking, The Creation of Ghost Warrior." From Ideation to Distribution, every step that allowed this film to be made on a budget of $5,000 is clearly illustrated.

The times are changing. One day in the near future, I hope we will see an explosion in the creation of powerful visual storytelling that retains every detail of their creator's vision. These films will come from small groups of "laid-off" industry veterans, collections of first-time filmmakers, and "lone Dreamers." And what these films will have in common will be their stories being exactly what they, the filmmakers, have always wanted to see. Because of this, these films will touch audiences far more deeply than anything the "Hollywood formula" has ever created. ■

TIMOTHY ALBEE IS WRAPPING ON PRODUCTION OF KAZE, GHOST WARRIOR FROM HIS SMALL, ONE-ROOM CABIN IN THE ALASKA FRONTIER. HE HAS AUTHORED "ESSENTIAL LIGHTWAVE" AND "LIGHTWAVE 3D CHARACTER ANIMATION"; HIS NEWEST BOOK, "CGI FILMMAKING, THE CREATION OF GHOST WARRIOR" WILL BE AVAILABLE FROM WORDWARE PUBLISHING IN JANUARY 2004. ALBEE IS A VETERAN OF WALT DISNEY FEATURE ANIMATION, "BABYLON 5," NBC, AND VARIOUS VIDEO GAMES AND COMMERCIALS. HE WILL BE SPEAKING AT THE EUROPEAN ASSOCIATION OF ANIMATION FILM'S CARTOON MASTERS SEMINAR IN A CORUÑA, SPAIN IN APRIL OF 2004. THE OFFICIAL WEB-SITE FOR "KAZE, GHOST WARRIOR" IS: HTTP://WORDWARE.COM/GHOSTWARRIOR

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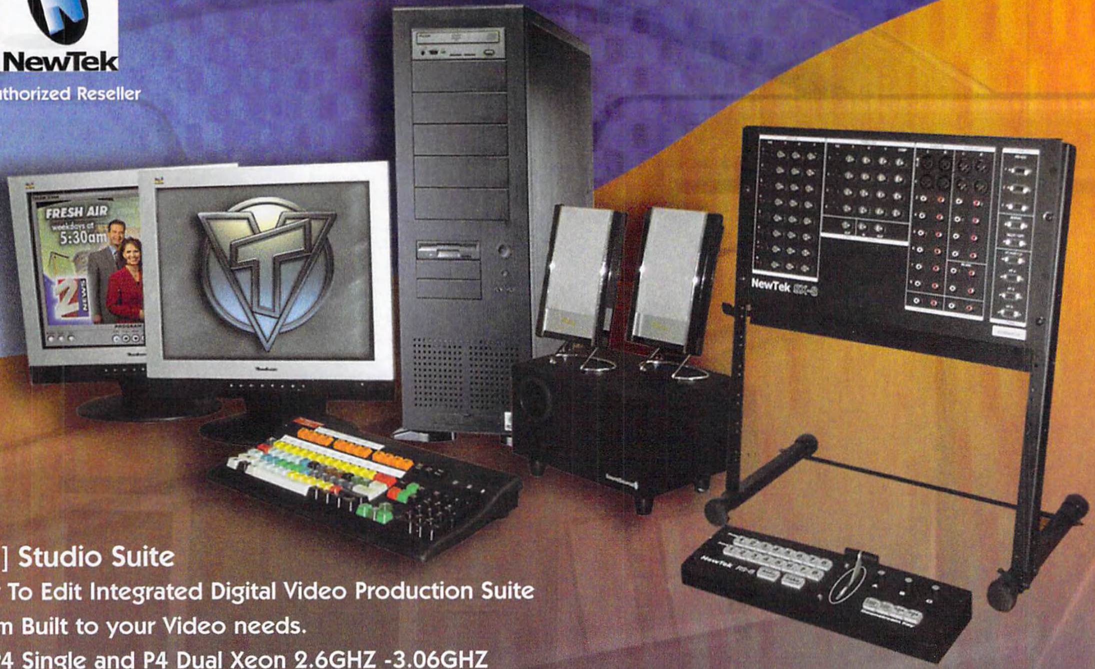

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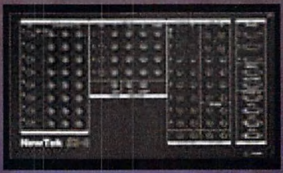

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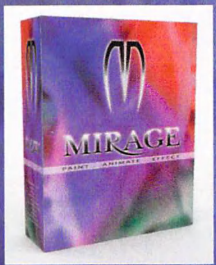

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HEAD TEXTURING

BY C.S. MONINS

IF, LIKE ME, YOUR DRAWING ABILITIES ARE LESS THAN PERFECT, PAINTING CHARACTER TEXTURES CAN OFTEN SEEM A DAUNTING TASK.

Luckily for us, Photoshop has a great set of tools for allowing anyone to work piece by piece to create textures that really look good. In addition, the surface editor in LightWave allows us some nifty tricks to really make things pop.

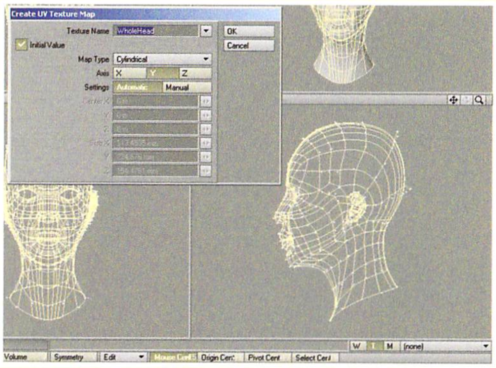
We will be looking at building a `texture rig' in this tutorial, taking you through the steps from preparing your model, to painting, surfacing, and finally setting up the textures with expressions to get some automated control over the subtleties. (A slight note: if you don't have a pressure-sensitive stylus for this job, you probably haven't got a snowball's chance, so I apologize. Stylus tablets aren't all that expensive. I have a little one to keep with the laptop, which is a Wacom Volito, which only cost £35. (US$45-50), so no complaints.)

This tutorial assumes that you are already familiar with the basics of using Modeler, Layout and Photoshop. First, download the file pack from www.keyframemag.com. (Check under "Resource Files" for "tex_csm_01.zip.")

In Modeler, we will prepare our head for texturing by creating some UV maps. One thing we want, though, is a way to get the UVs into Photoshop. There are loads of good ways to get UV templates out of LightWave, but I know a great one. Let me direct your attention to a diamond of a plug-in called UV Imaginator. It can be downloaded freely from this URL.

http://www.3dcybercorp.com/software/uvimaginator/index.html

Add the plug-in to Modeler, then cast your eye on our handy little illustrated guide for the rest of the story.


Create UV Texture Map

Texture Name: WholeHead

☑ Initial Value

Map Type: Cylindrical

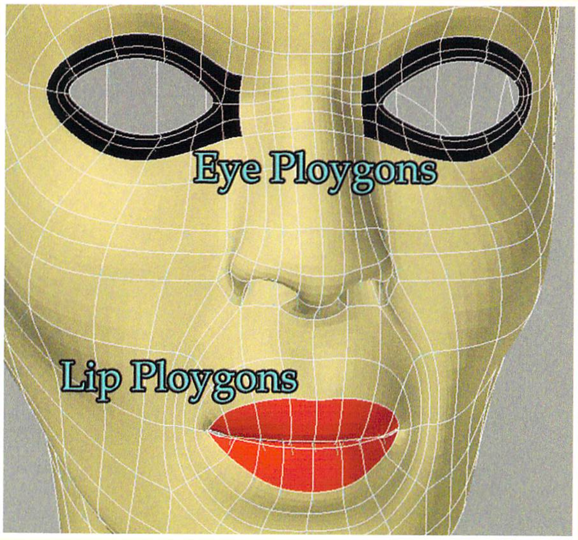
Axis: X Y Z

Settings: Automatic Manual

THE HEAD MODEL FILE– HEAD.IWO

Open the Head.lwo file from the pack and take a look at the model.

Switch to polygon mode, and select all the polygons of the entire head mesh. We're going to create a base texture and set of UVs on top of which the other textures will be applied. Create a new UV texture for these polys, call it WholeHead, make it CYLINDRICAL on the Y-AXIS, and leave it on auto.

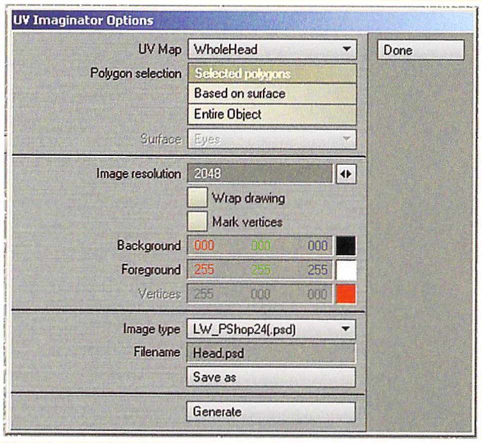


THE EYE AND LIP POLYS SELECTED AS IN HEAD_UV.IWO

With all of the head polygons still selected, give the surface a name. I usually follow along with my naming, so again WholeHead.

Select the "Panda Eyes" portion of the face as shown, and create a new UV map for these polys and name it accordingly. Do not give these polys their own surface name yet, though. It should be a PLANAR map on the Z-AXIS.

With this done, do the same again for the polys of the lips. You can load Head_UV.lwo, which has this already done.


UV Imaginator Options

UV Map: WholeHead

Polygon selection: Selected polygons / Based on surface / Entire Object

Surface: Eyes

Image resolution: 2048

☐ Wrap drawing

☐ Mark vertices

Background: 000 000 000

Foreground: 255 255 255

Vertices: 255 000 000

Image type: LW_PShop24(.psd)

Filename: Head.psd

UV IMAGINATOR OPTIONS WINDOW

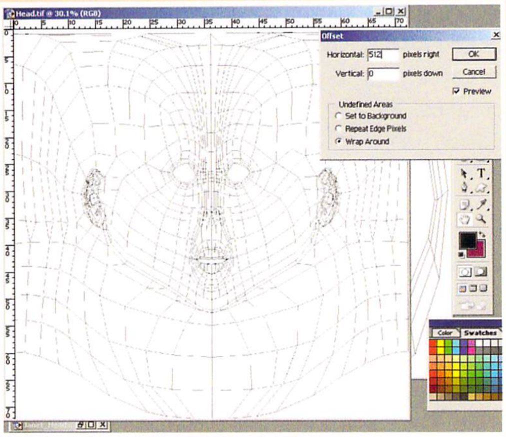
Now to use that plug-in. First, deselect all polygons, then go to your additional dropdown and start UV Imaginator. A dialog will appear as shown; the options are pretty much self-explanatory.

Select the WholeHead map from the dropdown, and set the resolution to 2048. Set the file type to PSD, then hit save as, give the image an appropriate name, and lastly hit generate. Do the same for the lips and eye maps, but use a resolution of 1024 instead.

So being finished with Modeler for the moment, open up Photoshop. Inside here is the reason for setting the UV maps to the resolution we have.

Firstly, a resolution of 2048 x 2048 gives the whole head map just enough pixels to paint any small details, such as fine lines or specks of stubble, without them appearing blocky when rendered on the model or viewed close up.

Secondly, Photoshop has a few procedural effects within it; render clouds, for example. If you render a procedural Photoshop filter on a square image with a resolution multiplier of 128, (so 128 x 128, 256 x 256, etc) then the filter will fit the image seamlessly, with no visible join when tiled, or such, in 3D.

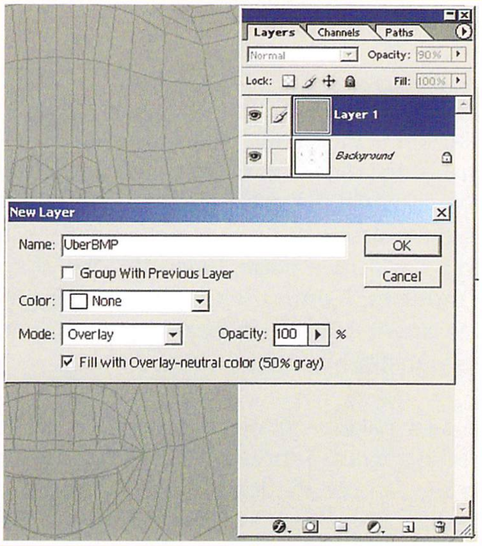


Horizontal: 512 pixels right
Vertical: 0 pixels down
☑ Preview
Undefined Areas
○ Set to Background
○ Repeat Edge Pixels
● Wrap Around

HEAD.TIF FILE OPENED IN PHOTOSHOP

Let's open our three images in Photoshop. You can shrink the Lips and the Eyes for now, and let's look at the head. One complaint I have heard on the odd occasion is the way the face of a character is off center in a LightWave UV. This is so easily remedied by using Filter> Other> Offset.

Set the Horizontal value to 512, (a quarter of the resolution), and wrap around, to bring the face dead center. Since the Lips and Eyes maps are planar, you won't need to do this for them.



Normal
Opacity: 90%
Fill: 100%

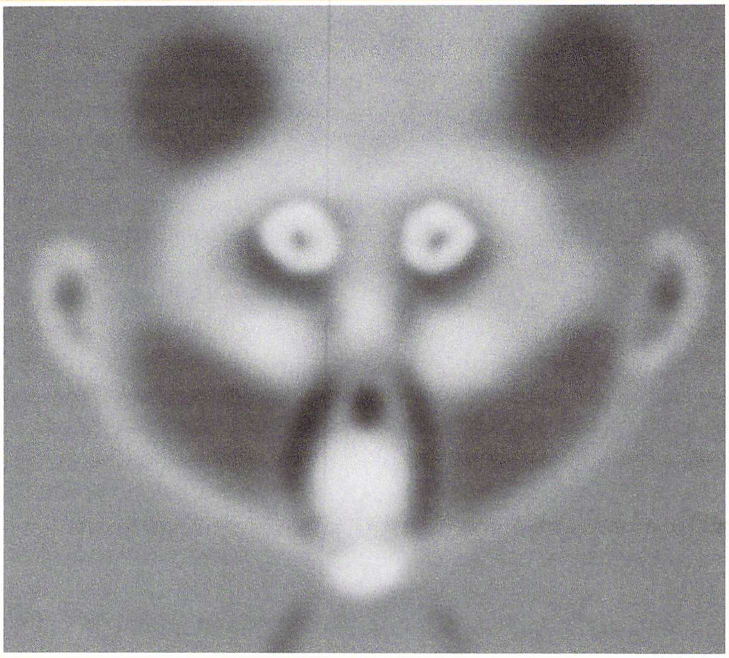
Name: UberBMP
☐ Group With Previous Layer
Color: None
Mode: Overlay
Opacity: 100 %
☑ Fill with Overlay-neutral color (50% gray)

CREATING THE UBERBUMP LAYER

On to the painting. The first part of this technique is to paint what I call the UberBump layer. Create a new layer, fill it with 50% grey, and set its opacity to around 85%. Now, create yet another 50% grey layer, set its blending mode to overlay, and Name it UberBMP.

Overlay is a godsend when it comes to painting bump maps. I like to approach texture painting by painting each set of individual details on their own layer, then mixing to taste later. By using overlay, you can use the dodge and burn tools to darken or lighten parts of a 50% grey image, whilst revealing the layers behind the areas left un-dodged or burned.

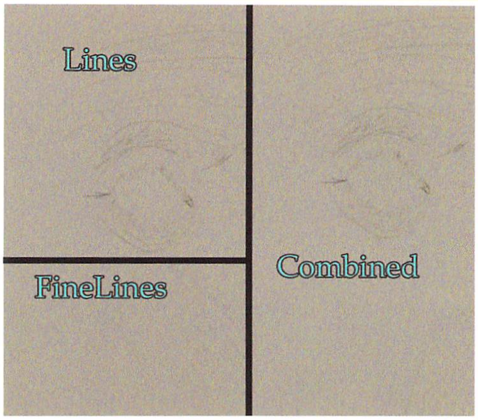
Essentially 50% grey is transparent in overlay mode.



THE UBERBUMP LAYER USING THE BURN TOOL

Pick up the burn tool, set the exposure to around 60% and the brush size to around 180px. Now paint on the UberBMP layer with the burn tool to create a roughed out bump of the more recessed parts of the face, the fleshy part of the cheek under the cheek bones, a smidgen at the temples, and so on. For areas like the rim around the outside of the eyelids, reduce the brush size to around 60px. Note the paining technique, a swirling action, not block, and not individual blobs. To darken some areas more than others, just go over them lightly a second time. For the highlights, switch over to the Dodge tool, and basically do the opposite. Use the tool to lighten the raised areas.

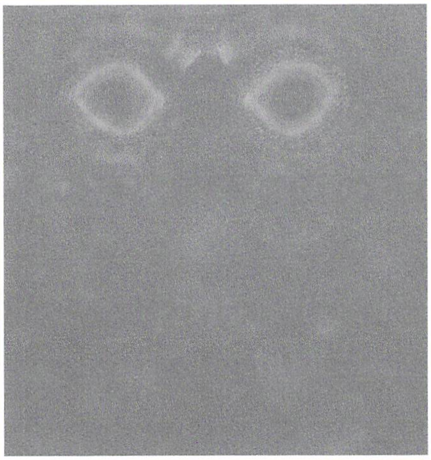
Once done with this part of the painting, select Filter>Noise>Add Noise. Select the type as uniform, monochromatic, and the amount to around 20-25%. Now choose Filter>Blur and Sharpen>Gaussian Blur. Set the radius somewhere around 5 (to taste) and hit OK. You should have something like this.



THE LINES AROUND THE EYES

Right then, time for some details. First, hide the Uber-BMP. Now create yet another new layer, again 50% grey, and overlay it. Back to the burn tool, bring the Radius back down to around the 5-6px mark with an exposure of around 40%, and zoom in on the eye. Reference yourself (or a hostage) for the main lines around the eyes and lids, and gently start painting them in with nice smooth strokes. Do the same for crease lines on the forehead, and either side of the mouth, but don't bother about the actual lips themselves; we'll come to them later.

Once again, new 50% layer, overlay (for ease, let's call this a Base Bump Layer). Now go down to a 4px brush, set the exposure to around 25%, and go back over the areas you just worked on and add finer secondary creases, then change down to a 2px brush, and add a few really fine ones.

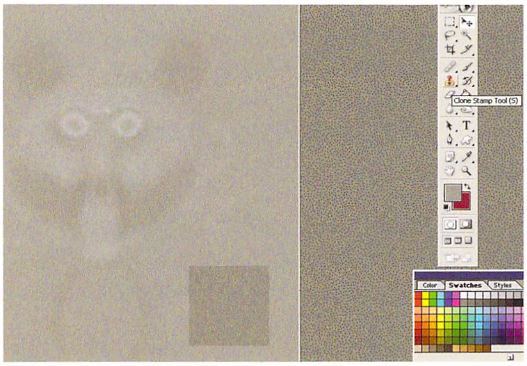


HIGHLIGHT AREAS FOR SKIN TEXTURE

For the highlight areas, start a new Base Bump Layer, and with the dodge tool set to exposure 50% and an 8px brush, paint in some soft highlight areas alongside the darker creases. As you work through each area of the face, change down to a smaller brush size to just pick out the central ridge of the highlight area between the creases.

Around the eyelids, I tend to use a swirly, tappy motion to capture the tiny fatty lumps you often see on and around a person's eyelids. I also do this twice using two different brush sizes to achieve some variation in there. Again, you may wish (I usually do) to go and add yet another layer with some even finer detail highlights.

Let's bring the grey only layer at the bottom of the stack back up to 100% opacity, hiding our mesh guide image. Your highlights should resemble this.

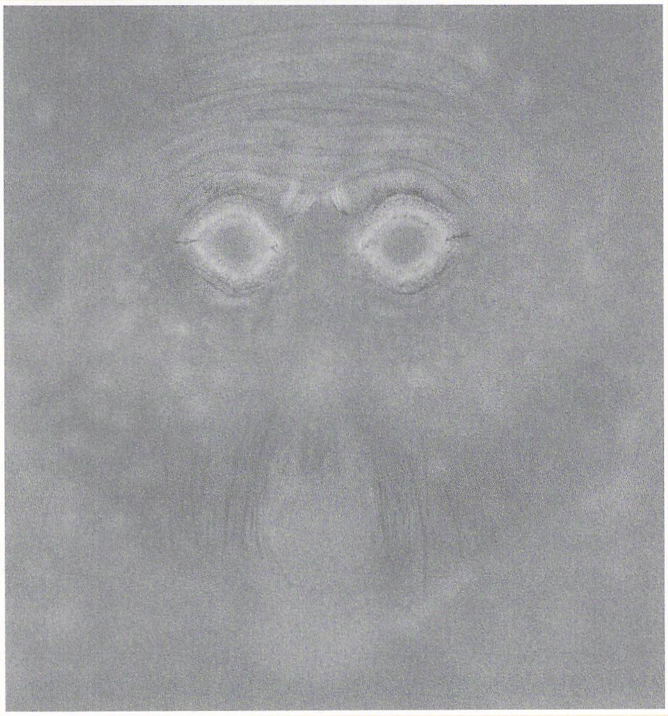


HIGHLIGHT AREAS AT 100% OPACITY

Let's talk about Poisson, and no I don't mean fish. Poisson distribution is the pattern that pores on the skin form; it takes an age to paint, and there's no procedural solution in LightWave that mimics it properly. The best I have is the image file poisson.tif (in the pack), which is an image generated by a PRman code. Open this file, drag copy it (with the move tool) onto the top of the bump image we have so far, and it will automatically set itself a new layer. Change its transfer mode to Overlay.

For ease, let's make all our other bump layers we've painted (except for the grey base) invisible, and reduce the grey base's opacity so we can see the template. Drag the Poisson map over to the side of the cheek, just past the edge of the ear, and zoom in a little. Poisson wants to be on the forehead, the cheek bone/under eye, and nose for the most part. Get the trusty Clone Stamp Tool, with a brush size of about 30px and opacity and flow set to 60%, and start cloning the map over the nose to begin with, making sure the edges are kept nice and soft. Watch that you don't go over the edge of the Poisson map, and clean up any errors with an undo or the blur tool.

Work area by area, keeping the map lighter on the nose areas, and more pronounced at the under eye, and the brow. You can give a light brush over some areas with the burn and dodge tools set to low exposures to tidy it up and create a little variation, too. When done, mask a box around the original Poisson square, and delete it. This is why you needed to keep it clear of where you cloned to.

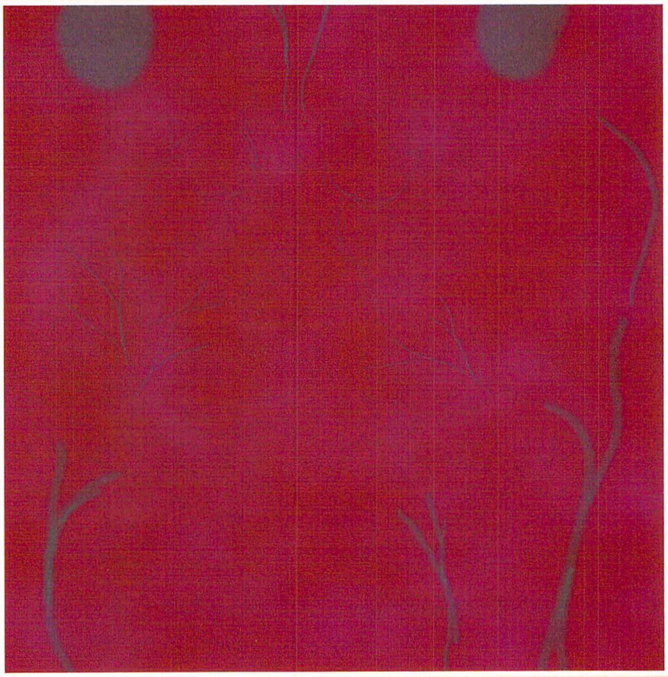


THE TEXTURE WITH ALL LAYERS AT FULL OPACITY AND ADJUSTED

Now the fun bit. First make a new Base Bump Layer and sprinkle on the noise filter at around 20%. Gaussian blur it to about radius 4. Now bring all of your layers back up to full visibility, and start mixing the bump map. Work through each separate layer, adjust their opacities, and tweak at them with Image>Adjust>Levels to lighten or darken them each until you get a nice mix between the raised and recessed parts. There is no easy way to tell you what works best, as it's mostly down to taste. The best advice I can give is remember that bumps work better with greys. Just a few, tiny sprinklings of absolute black and white in the really notable areas, otherwise, keep most of it in the grey spectrum.

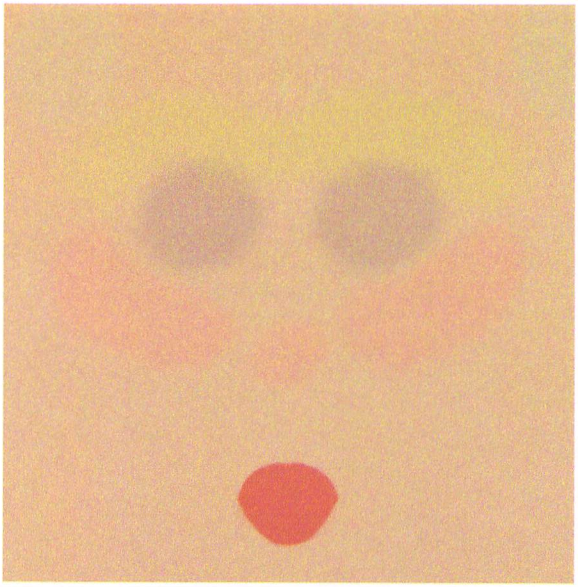
Now for some color. Turn off visibility for all of your bump layers, and lock them to prevent random fubars. You should by now have saved your file; if not, let me recommend the file name head_layers.psd.

To begin the color, create a new empty layer, and position it below all of the bump layers. Set your fore and background colors to some nice, gross, meaty colors (I'm using 121,0,0 and 99,25,53), and hit Filter>Render>Clouds. This will be our sub-surface layer, just to get the variation



THE SUBSURFACE SKIN LAYER LAYER WITH COLOR AND VEINS

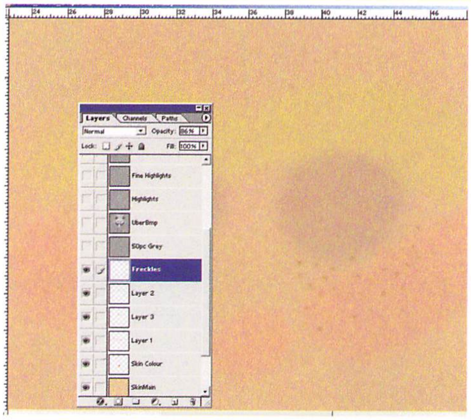
started. Drop the layer's opacity a little so as to see the template. In a new layer or layers, use the paintbrush with opacity 50-70% and colors between dark reds, and sort of turquoise sludge to paint veins running through the head. You can get away with just one or two well-placed ones, with the forehead a prime target for them. Note that if you want to do black skin you can pretty much ignore this, as the amount of subdermal detail visible is extremely minimal. (Of course, if you were as pale as me, you wouldn't paint any other layers except a bit of grey as you chased down the Gollum look).



THE START OF ROSY CHEEKS & NOSE AND BROW HIGHLIGHTS

The main color map will resemble the UberBMP in its manufacture. Create a new layer and fill it, 194,160,122 for a basic skin color. Add some color noise, around 20-30% and blur it off with the Gaussian Blur until you get a really soft fleshy look, somewhere around radius 4-6.

Now drop the opacity of the layer a little so you can just begin to see the subdermal details showing through. Take up the Paintbrush again and in new layers use a large medium opacity brush to gently paint in some rosyness on the cheeks and nose, a light yellow hue across the brow, and a faint purple/brown in the eye sockets. Again, mix these layers together as you did the bump until you get a nice, natural looking mix.



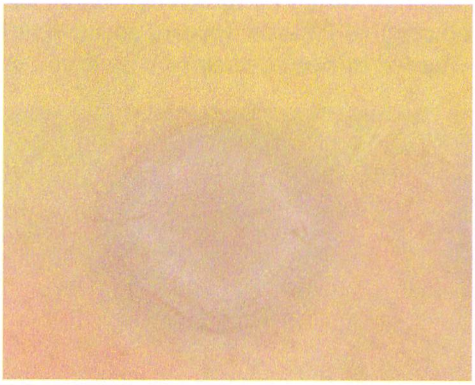
Normal

Opacity: 86%

Fill: 100%

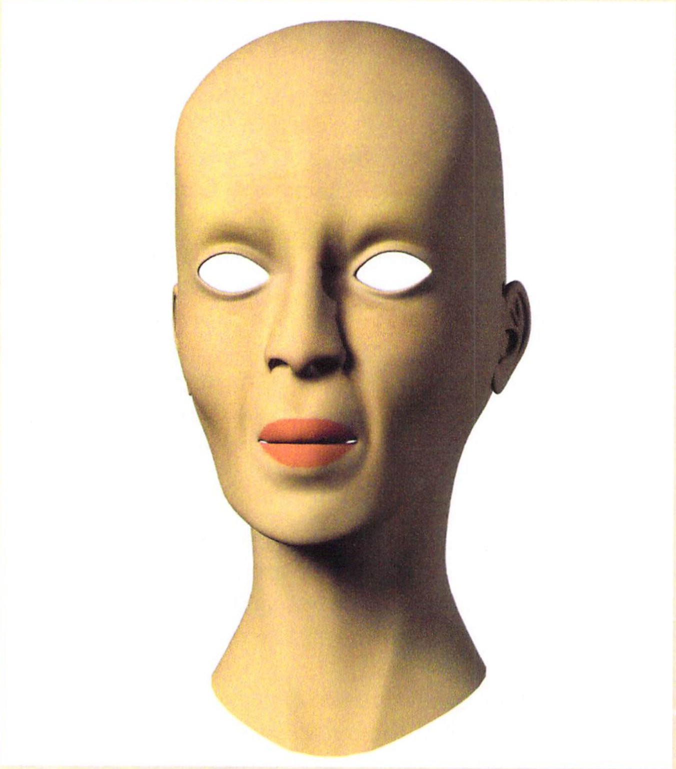
ADD FRECKLES IN A NEW LAYER

Time to add a few details. Again, using separate layers, paint in any details of freckles or makeup. Just as with the bump layers so far, we're not going to paint in the lip parts of the texture; well, not fully. We will paint in just the basic block area of the lip color with a light, soft edge to blend naturally into the surrounding mouth area.



THE REASSEMBLED BUMP LAYERS

Let's get the crease details started. Create copies of each one of your bump layers (with the exception of the grey only base), and reassemble them into an identical bump stack between your color stack, and the original bump stack. Make this copy stack visible. Well, if Robert isn't your auntie's live-in lover now! Already you can see the effect that this has for adding detail to the color map. It's not perfect, so go through each of these copied layers again and mix them down, along with the color layers, until you get an effect that leaves these bump details visible, but subtle.

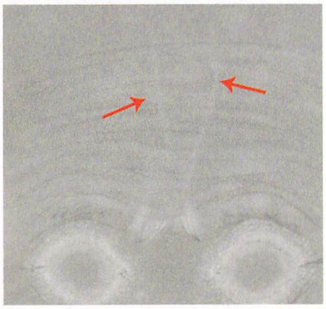


THE RENDERED HEAD OF OUR MODEL

Let's admire our handiwork. Ah cheers, mate, two sugars, ta.

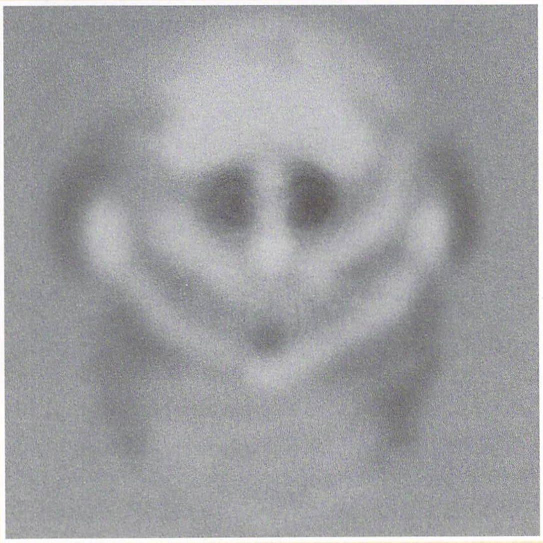
Save the head_layers.psd, then go to Layer>Flatten Image. Choose OK to discard hidden layers. Remember that we need to undo the offset to use this, so choose Filter>Other>Offset at –512. Once done, carefully SAVE AS, Head_CLR.psd. Back in Modeler, go to the Surface Editor and select the WholeHead surface. Click the T next to color. The texture, set as an image map, UV projection on WholeHead UV map, with the image being Head_CLR.

Doesn't she look nice? Go ahead and light and render something now if you like, to really see how it's coming so far.



VEINS NEED TO BE BRIGHTENED

Two minutes are up, get back to work. Re-open head_main.psd. One thing we did was to create veins (maybe some freckles, too), which will cause bumps. Next, we need to remedy our bump map. Bring your original bump layers back online, and make copies of your vein and any other such layers you've added, (freckles, scars). Use Adjust>Levels to really brighten them up towards white, then mix them down into your bump composition, dodging, burning, and blurring as required. Don't worry if there's still a bit of color left in them, we'll ditch that soon enough. Right now focus on their brightness.

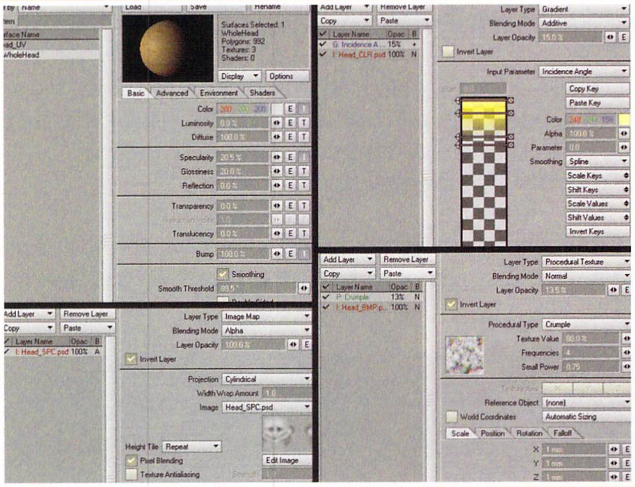


LIGHTEN SHINY AREAS, DARKEN AREAS THAT ARE NOT

What's left is basically just the specular. The first thing to do is paint an UberSpec. By now, this should require little explanation. Do exactly what you did for the UberBMP layer, but instead, pay attention to lightening areas that are shiny, like the nose, the cheek bones, and darkening areas that are not, such as the eyelids, around and under the jaw, etc.

Once this is done, go ahead and make more copies of the wrinkle and highlight bump layers, and mix these down on top of your UberSpec.

Just as we did with the color map before. Save the head__layers, then hide layers, flatten image, and undo offset until you have produced Head_BMP, and Head_SPC files. Once you have flattened the images for the bump and spec, set the Image>Mode>Greyscale to dump any redundant color information. You can find the three completed textures in the pack also, under those names.



Surfaces Selected: 1
WholeHead
Polygons: 992
Textures: 3
Shaders: 0

Color 200 200 200
Luminosity 0.0 %
Diffuse 100.0 %
Specularity 20.5 %
Glossiness 20.0 %
Reflection 0.0 %
Transparency 0.0 %
Translucency 0.0 %
Bump 100.0 %
☑ Smoothing
Smooth Threshold 89.5°

Layer Name	Opac	B
G: Incidence A...	15%	•
I: Head_CLR.psd	100%	N

Layer Type Gradient
Blending Mode Additive
Layer Opacity 15.0 %
☐ Invert Layer
Input Parameter Incidence Angle
Color 248 248 156
Alpha 100.0 %
Parameter 0.0
Smoothing Spline

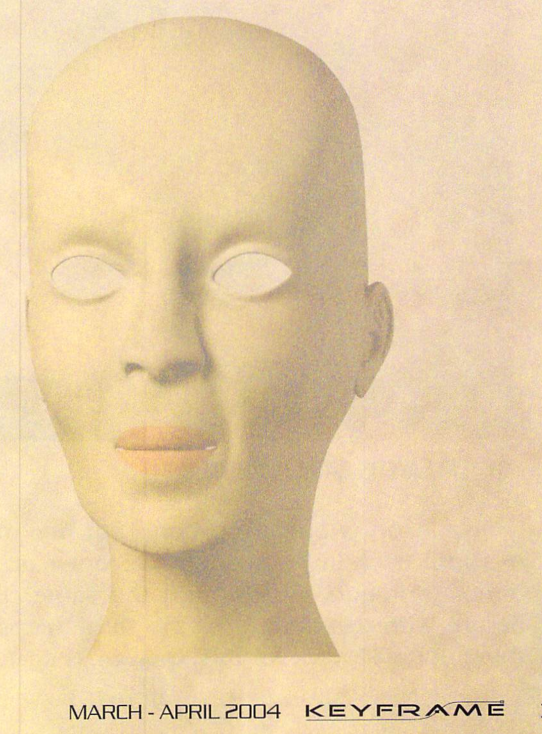
Layer Name	Opac	B
I: Head_SPC.psd	100%	A

Layer Type Image Map
Blending Mode Alpha
Layer Opacity 100.0 %
☑ Invert Layer
Projection Cylindrical
Width Wrap Amount 1.0
Image Head_SPC.psd
Height Tile Repeat
☑ Pixel Blending
☐ Texture Antialiasing

Layer Name	Opac	B
P: Crumple	13%	N
I: Head_BMP.p...	100%	N

Layer Type Procedural Texture
Blending Mode Normal
Layer Opacity 13.5 %
☑ Invert Layer
Procedural Type Crumple
Texture Value 80.0 %
Frequencies 4
Small Power 0.75
Reference Object (none)
☐ World Coordinates
X 1 mm
Y 1 mm
Z 1 mm

OUR TEXTURE BROUGHT INTO LAYOUT



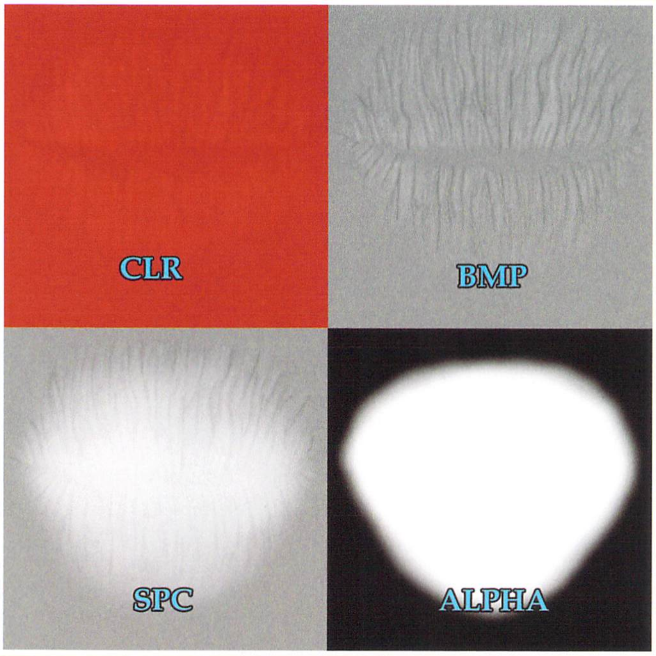
We'll pop our model into Layout now and apply the three textures in the Color, Specular, and Bump channels respectively. Set up a light and a camera (or open tex_mid.lws from the pack), turn on VIPER, and render a frame.

Oh no. The render looks nice, but what is Viper up to?? It would seem Viper doesn't like UVs, so instead, switch the projection type to cylindrical on the Y and hit auto sizing. This is just temporary, and the textures will fit badly, but it's good enough for a Viper preview.

You can see my surface settings here. Notice on the Bump channel I've added an inverted Crumple Shader, set to 1mm at 13.5% opacity. This helps to pick out some extra "cellular" style detail in the bump, which blends nicely with the painted map without looking too procedural. One tip I haven't covered is to paint another map as an alpha for where on the head this procedural occurs or does not occur. Add others and experiment here, though; you'll doubtless find a great combination.

I've also added a yellowish gradient on the Color channel set to incidence angle with alpha fading. This helps a little way towards simulating sub-surface scattering, and is purely down to personal taste.

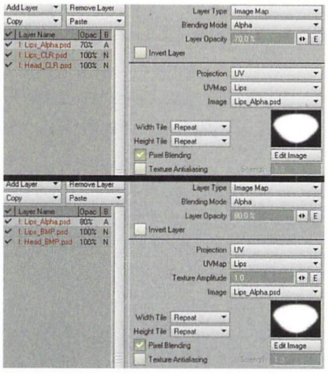
When happy, reset the maps to UV projection, and save the newly textured object. Mine is Head_UV_tex.lwo.


CLR
BMP
SPC
ALPHA

THE LIP LAYERS BACK IN PHOTOSHOP

Now many would stop here, but not me, I'm on a mission. Back in Photoshop, we open up the Lip UV template image. Go through the same procedure as before with this image for the three maps. One extra thing you will want for this, though, is an Alpha map to blend these textures down onto the base head ones.

Using the paintbrush on a black layer, Paint the lips in white, making sure to stay just inside the outer line. A dash of blur, and we're in business.


Add Layer
Remove Layer
Copy
Paste
Edit Image

Layer Name	Opac	B
I: Lips_Alpha.psd	70%	A
I: Lips_CLR.psd	100%	N
I: Head_CLR.psd	100%	N

Layer Type: Image Map
Blending Mode: Alpha
Layer Opacity: 70.0 %
☐ Invert Layer
Projection: UV
UVMap: Lips
Image: Lips_Alpha.psd
Width Tile: Repeat
Height Tile: Repeat
☑ Pixel Blending
☐ Texture Antialiasing

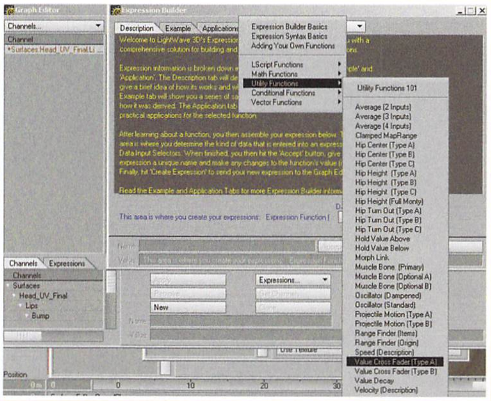
Layer Name	Opac	B
I: Lips_Alpha.psd	80%	A
I: Lips_BMP.psd	100%	N
I: Head_BMP.psd	100%	N

Layer Type: Image Map
Blending Mode: Alpha
Layer Opacity: 80.0 %
☐ Invert Layer
Projection: UV
UVMap: Lips
Texture Amplitude: 1.0
Image: Lips_Alpha.psd
Width Tile: Repeat
Height Tile: Repeat
☑ Pixel Blending
☐ Texture Antialiasing

LIP UV TEXTURE IN MODELER

Now for the really cool parts. Ever notice how when you purse your lips, the creases deepen? In Modeler, set a viewport to be UV texture, and select the lips texture. Give these polys the surface name Lips.

Into Layout, and open the Surface Editor. Copy the WholeHead surface, and paste it onto the Lips surface. Now go into each of the three channels and add the three Lip textures respectively, projected on the Lips UV map. Copy these texture layers, add them a second time to the layer stack, and replace the image maps with the Lip Alpha maps with their blending modes set to Alpha. You can see the settings here. Notice I've also removed the Crumple Shader and yellow gradient from the Lip surface channels.


Graph Editor
Expression Builder
Channels...
Channel
•Surfaces.Head_UV_Final.Li ...
Description
Example
Application
Expression Builder Basics
Expression Syntax Basics
Adding Your Own Functions
LScript Functions
Math Functions
Utility Functions
Conditional Functions
Vector Functions
Utility Functions 101
Average (2 Inputs)
Average (3 Inputs)
Average (4 Inputs)
Clamped MapRange
Hip Center (Type A)
Hip Center (Type B)
Hip Center (Type C)
Hip Height (Type A)
Hip Height (Type B)
Hip Height (Type C)
Hip Height (Full Monty)
Hip Turn Out (Type A)
Hip Turn Out (Type B)
Hip Turn Out (Type C)
Hold Value Above
Hold Value Below
Morph Link
Muscle Bone (Primary)
Muscle Bone (Optional A)
Muscle Bone (Optional B)
Oscillator (Dampened)
Oscillator (Standard)
Projectile Motion (Type A)
Projectile Motion (Type B)
Range Finder (Items)
Range Finder (Origin)
Speed (Description)
Value Cross Fader (Type A)
Value Cross Fader (Type B)
Value Decay
Velocity (Description)
Channels
Expressions
Surfaces
Head_UV_Final
Lips
Bump
Expressions...
New
Position
0
10
20
30

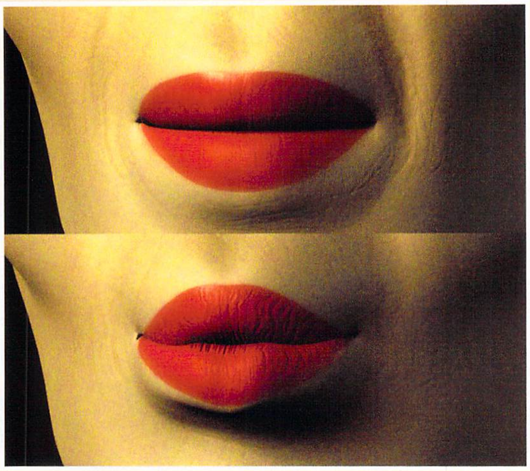
This area is where you create your expressions:

Select the head object, and add the Morf Mixer to it. You'll see a raft of morfs, but for now let's stick to Vocal.Ooo_2. In the Surface Editor, bring up the Bump channel for the Lips surface, and click the E next to the amplitude value to add an Envelope to it. Here we will use an expression to tell this texture to increase its amplitude from 3 to 9 as the Vocal.Ooo_-2 morf moves from 0 to 100%.

If you're new to expressions hit the expression builder, and choose Utility Functions>Value Cross Fader A. The builder will help you get a grip on using expressions for this sort of thing. It can explain itself, so I won't bother and will instead just tell you the finished thing.

```
mapRange([head.Vocal.Ooo_2],0.000,1.000,3.000,9.000)
```

Apply this to the selected channel.



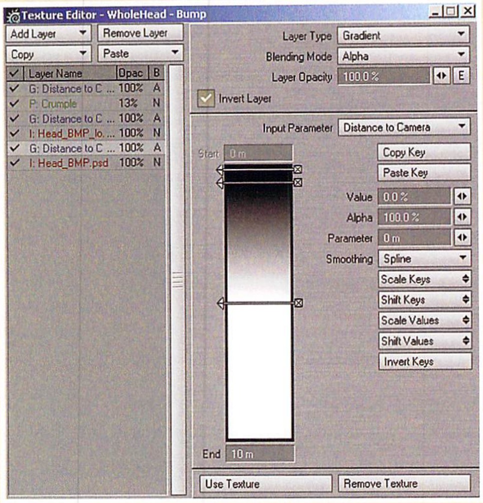
AN ANIMATION SHOWS THE CRACKS DEEPENING

If you now render a quick animation of say 25 or 30 frames sliding the Vocal.Ooo_2 morf from 0 to 100%, you should see the cracks in the lips deepening as the lips purse. Beautiful. The pack files are head_lips.

You may remember that we created UVs for the eye areas too, but have done nothing with them. Well, that'll give you something to do. The trick with the increasing eye wrinkles is this, though: When you blend the Eyes texture on top of the WholeHead texture, you'll want to not set its opacity at a full 100%. This way, the new wrinkles laid on top will deepen as the eyes scrunch up when properly linked to a suitable morf, but other wrinkles around that area won't do because they belong to another texture layer. Some wrinkles deepening while others do not gives a far more natural look. So now that I've shown you how, go on and find out for yourselves how to make it work best, but before you do that, I'm going to show you one other quick trick involving gradients.

One problem that you get with fine details, especially bumps, is that when the camera moves to a point where the small details are smaller that 1 pixel in size in your render, you get a shimmering, or buzzing on the surface.

This is remedied by using lower resolution textures and swapping them over as the camera moves away. We can take our three main head maps and scale them down to 25% in Photoshop first, then in Layout, do the swapping with gradients, using the input parameter of Distance to Camera. Copy the main texture layer for the BMP, SPC, and CLR in the WholeHead surface, so as they sit above the originals in their stacks. We will use the gradients to fade out the main texture as the camera moves away, and fade up the lo-res version to compensate. The settings are shown here.



Texture Editor - WholeHead - Bump

✓	Layer Name	Opac	B
✓	G: Distance to C ...	100%	A
✓	P: Crumple	13%	N
✓	G: Distance to C ...	100%	A
✓	I: Head_BMP_lo. ...	100%	N
✓	G: Distance to C ...	100%	A
✓	I: Head_BMP.psd	100%	N

Layer Type: Gradient
Blending Mode: Alpha
Layer Opacity: 100.0 %
☑ Invert Layer
Input Parameter: Distance to Camera
Start: 0 m
End: 10 m
Value: 0.0 %
Alpha: 100.0 %
Parameter: 0 m
Smoothing: Spline

GRADIENT SETTINGS FOR FADING MAIN TEXTURE

The gradients are set to blending mode Alpha. Keys are set to black at 0m, and 0.5m, then white at 5m. Sit one above the main texture, and set it to Invert Layer, then copy it above the lo-res texture, and un-invert it. You'll notice with the bump channel, I've added one also above the crumple. The pack files are head_final.

So that's it. Hopefully you will now have a better insight into some of the more in-depth techniques for texturing your objects within LightWave. Experiment with the settings and practice a little to find the look that you're after, but most of all, just keep on waving. 🟥

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THE LIGHTWAVE 8 DOPE TRACK

BY DAN ABLAN

WE BEGIN OUR SERIES ON LIGHTWAVE 8 WITH A TIP ON A HIDDEN FEATURE, THE DOPE TRACK, THAT OFFERS YOU EVEN MORE CONTROL OVER YOUR KEYFRAMES.

With LightWave 8's release, there are so many features that we could dedicate a magazine to covering this cool 3D application. Wait! We did! This article will begin our ongoing coverage of LightWave 8, its tools and featureset.

There's a hidden feature in the Layout timeline that you may or may not have found. If you move your mouse just above the timeline, right in the center, a small arrow will appear, as in figure 4.9.

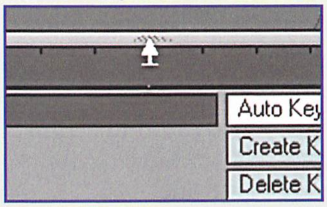

FIG. 4.9 – JUST ABOVE THE TIMELINE IN LAYOUT, YOU CAN CLICK TO OPEN THE DOPE TRACK.

When you see the arrow, click on the bar which separates the Layout view and the timeline. The LightWave 8 Dope Track will appear, offering additional control over your keyframes. See, it's all about control - the more you have the better!

A dope track is a short, or mini version of a dope sheet. What's a dope sheet, you ask? No, not something you'd use in school to cheat on a test, but rather a page that outlines all of your keyframes, motions and timing. LightWave 8 has a dope sheet, which we'll get to. For now, the Dope Track is a simplified version of the Dope Sheet, which allows you enhanced control over your keyframes. To get an idea of how the Dope Track works, do the following:

1. Click the top center of the timeline to pop open the Dope Track.

2. If you still have your three keyframe animation in Layout, you can use that. Otherwise, load it from the book's DVD-ROM, Chapter 4 projects directory. This scene is nothing more than one camera with three keyframes applied at 0, 30 and 60.

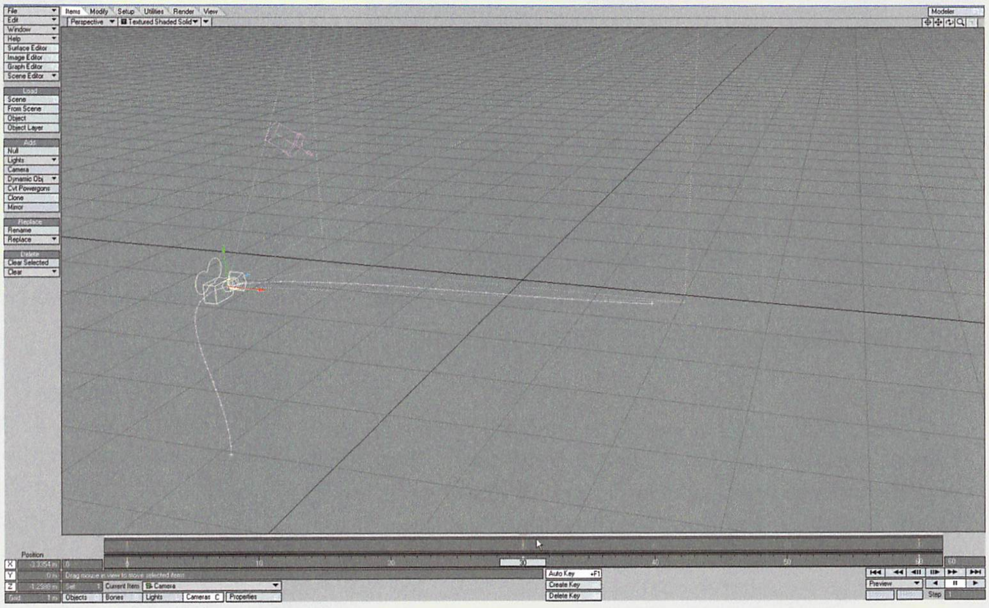

FIG. 4.10 – CLICKING THE BAR ABOVE THE TIMELINE OPENS THE DOPE TRACK.

3. You'll see what looks like a second timeline appear above the first timeline, as in figure 4.10.

1. With just three keyframes applied to the camera, you can see their representations in the Dope Track.

2. If you right click on one of the keyframes in the Dope Track, you'll get a list of commands available to you, as in figure 4.11.

By right clicking on one of the keyframes in the Dope Track, you will be greeted by a list of tools.

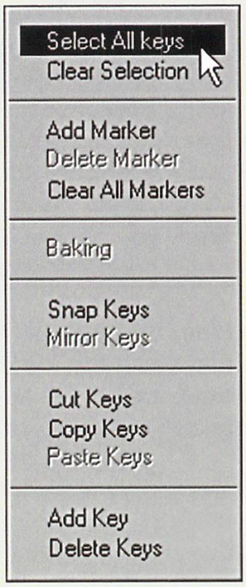

FIG. 4.11 – LIST OF COMMANDS AVAILABLE

MAC USERS!

REMEMBER TO HOLD DOWN THAT CTRL KEY TO SIMULATE RIGHT MOUSE BUTTON FUNCTIONS. *HEY, DID YOU GO OUT AND GET A TWO-BUTTON MOUSE YET?*

Now some of these commands are ghosted with such a simple scene. But as you build more complex animations, you'll find these tools very useful. Here are some tips to demonstrate the power of the Dope Track.

- Keyframes in the Dope Track are shown on a per-channel and per-mode basis. What this means is that if you were to create keyframes on X, Y, or Z-axis and you change to the Rotation tool, which controls the Heading, Pitch, and Bank, you won't see the keyframes created on the X, Y or Z.

- In the Dope Track, the left mouse button selects keyframes.

- If you hold the Alt key and drag keyframes in the Dope Track, you will be able to make copies of those keyframes while leaving the originals untouched.

- You can hold down the Alt key and select a range in the Dope Track which gives you a local zone. In this zone, you can bake keyframes for Move or Rotate. Baking is the process of freezing LightWave's interpolated frames into actual keyframes. Conversely, holding both the Alt and Shift keys sets a zone, allowing you to bake everything, including other objects.

- To delete a zone you might have created with the previous step, hold down the Ctrl and Alt keys and drag.

- You can grab the arrows on either end to allow the zone to become bigger or smaller. Or, grab in the center and move the zone.

- You can snap keyframes in the Dope Track. LightWave's general options (press o in Layout) allow you to turn on a feature called fractional keyframes. If this is on, you can snap the selected keyframe to the closest whole keyframe, such as 1, 2 or 5. A fractional keyframe is in-between a whole keyframe, such as 1.3 or 2.7.

- A really cool feature of the Dope Track is that you can copy and paste keyframes. You can't do this in the timeline. However, when you paste keyframes, LightWave will use the timeline slider as a guide for where to paste.

As we create more tutorials in upcoming issues of Keyframe, you'll really see how this cool new feature helps your animation workflow. But hopefully this gave you an idea of how this feature enhances LightWave's timeline and keyframing capabilities.

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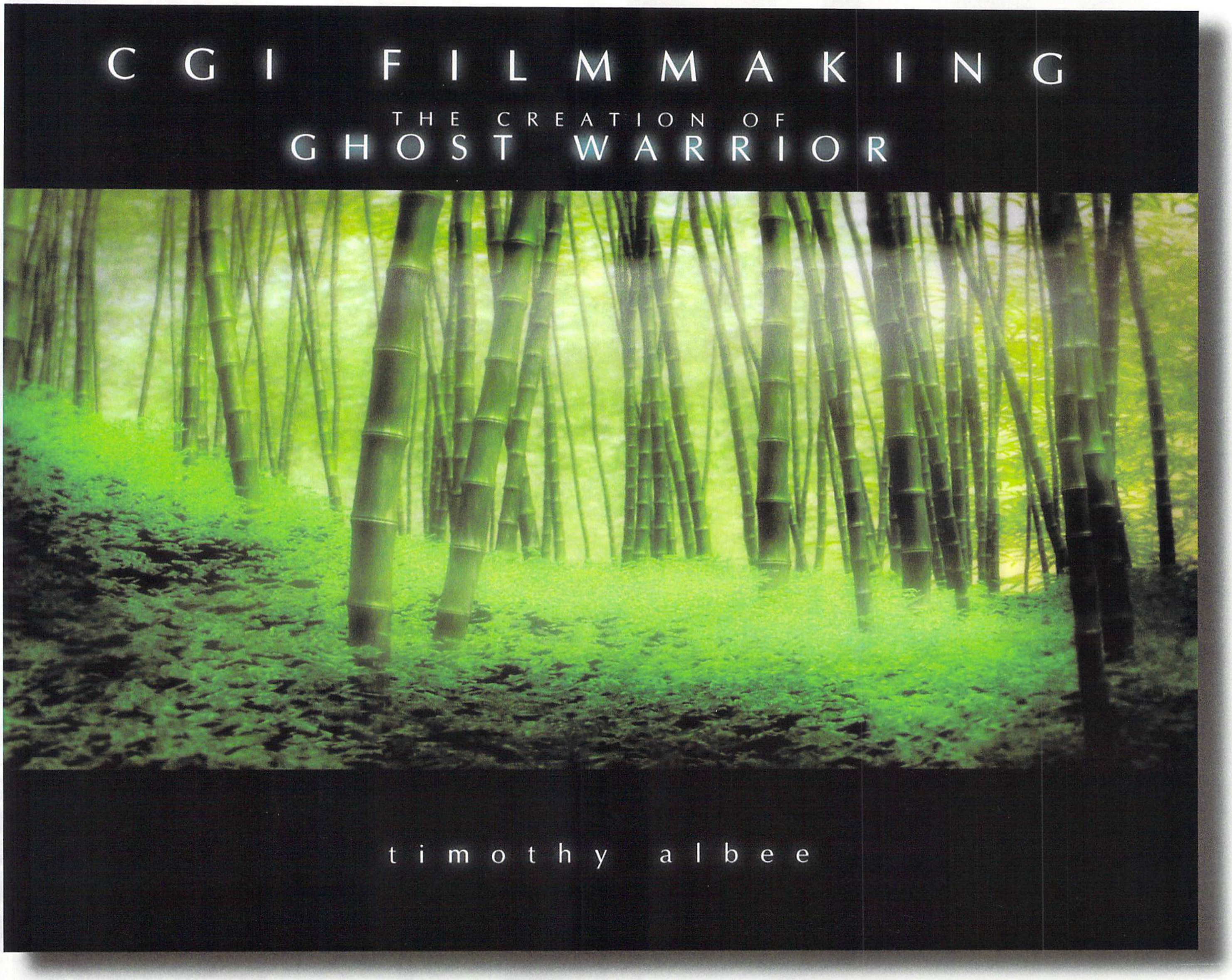
BOOK REVIEW—

BY MIRIAM TAYLOR-COOPER

CGI FILMAKING: THE CREATION OF GHOST WARRIOR

BY TIMOTHY ALBEE



Timothy Albee's new book, "CGI Filmmaking: The Creation of Ghost Warrior," is a must for anyone with an interest in creating his/her own film. Albee guides the reader through the step by step process of filmmaking from script to screen. His approach is very conversational, as each chapter offers a view of the process behind the scenes and reveals many tricks of the trade.

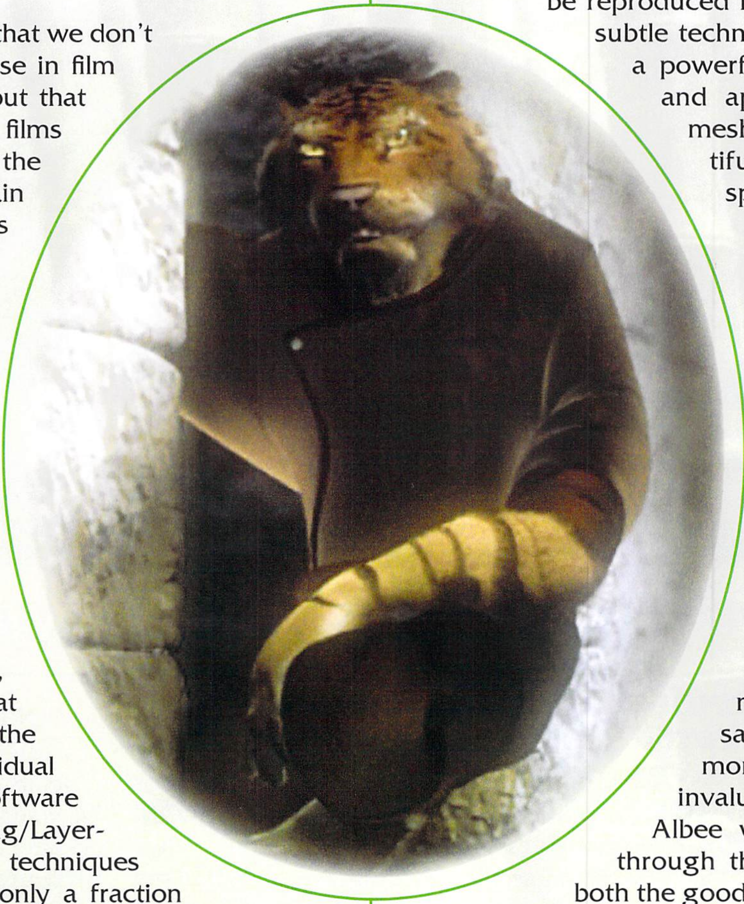
Albee's approach is geared towards the average person who does not possess the financial means used to make the large-scale productions we see in theaters today. The movie "Kaze, Ghost Warrior" serves as living testament that one person can make a 22-minute film in six months of production with only a $5000 budget. True, this is unheard of at the moment in The Industry, but as you walk through each chapter and see how Albee cuts corners and still manages to come up with a film worthy of gracing the big-screen, it suddenly becomes apparent that we could all do this with the right combination of desire, dedication and knowledge.

Albee is a also a professional illustrator, accomplished musician and talented painter. In this book, he shows how all these talents were combined to create the storyboards, soundtrack and backdrops for sets, such as the tapestries seen in Soshi's chambers.

For those not talented in music, Albee provides shortcuts. He explains how technology has become so advanced over the years that electronic wind instruments, tone generators, and Looping software can take the place of real, acoustic instruments and the audience will never know the difference. The idea of using the cab of his pickup truck as a recording studio was just brilliant—and these are just a few of the many tips that are mentioned throughout the book!

If you're not so great in the Art Department, you're not alone. Albee was once there, too, and has said that drawing never came easy to him. Through the explanations of his process, readers are left with a feeling of, "Hey, I could do this!" Albee shows his readers the designs from their rough, scribbly beginnings through every step that took place to reach the final product.

Albee clues us in to the fact that we don't have to have years of expertise in film (although it certainly helps), but that by really studying the great films that are available to anyone at the local video store, one can obtain almost as much knowledge as a film student with years of college, if you know what to watch for. By watching and dissecting the "masters" at work, a filmmaker can gain a tremendous amount of knowledge and have fun at the same time! "If your going to create a "high brow" film, don't fill your head with "Dumb and Dumber," Tim explains.



The process of ideation, script writing, and creating great dialogue are just a few of the subjects touched on in individual chapters. Using well-chosen software and Compositing, (Blending/Layering) partial-renders, Albee's techniques allow the animator to spend only a fraction of his/her time getting beautiful finished Renders, compared to using only a 3D package. Albee even covers hardware issues, and explores often overlooked but vital tools, such as Dual-Processor motherboards, Graphics Accelerators, uninterruptible power supplies and maintaining file-backups.

In software, Albee not only touches on the primary 3D and Compositing packages, he also explores little-known tools such as Lip Service, which allows the filmmaker to save days in the creation of lifelike facial animation. These time-saving tools and short cuts are a must for any artist who desires to create a brilliant piece of film and not waste their whole lives doings so.

Scheduling is also an important point brought up in this book. Production Management is key to the successful completion of any project. Albee acknowledges that not everyone has time to devote months on end to a project but he points out that by keeping a schedule and sticking to it, you will eventually see your project complete!

What contributes to a great story becoming a great work of visual storytelling is within the camera angles and the way the scenes are played out on screen. These are subtle views and ideas that are not easily seen at first, but Albee walks the reader through each one and breaks them down to reveal why they work and how they can be reproduced in your own film. When these subtle techniques are laced together with a powerful script, believable dialogue and appealing characters, they all mesh together to produce a beautiful work of filmmaking that speaks louder than words.

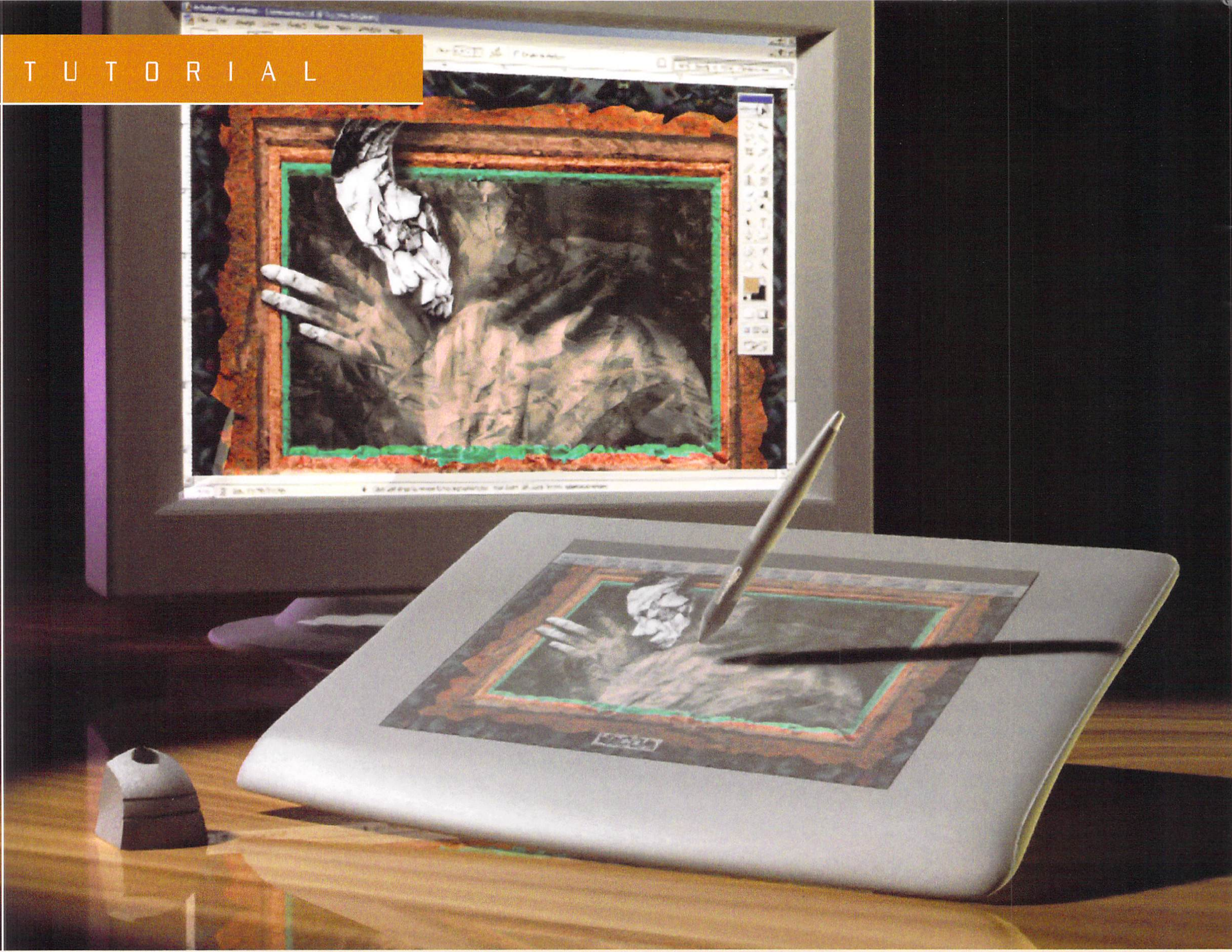
Albee finishes up with tips on marketing your final product and explaining the importance of film festivals, online distribution and working within your local community to spread the word. He takes note of such traps that a newbie filmmaker might fall into, and explains the hazards of "Hollywooding."

This book is filled with so many tips and tricks that will save the reader both time and money. It is a must have and invaluable when you consider that Albee wrote this book as he went through this process himself, outlining both the good and the bad so the reader can make the best decisions right from day one. ■

CGI FILMMAKING, THE CREATION OF GHOST WARRIOR
ISBN 1-55622-227-0 • WORDWARE PUBLISHING • $49.95

HIGHLY RECOMMENDED: 10/10

MIRIAM TAYLOR-COOPER LIVES AND WRITES FROM NORTH POLE, ALASKA.



MODELING, TEXTURE AND RENDER

BY STEPHEN M. BURNS

APPLYING PHOTOSHOP TEXTURES TO YOUR LIGHTWAVE PROJECTS CAN GIVE YOU ABSOLUTE CONTROL OF YOUR IMAGE'S LOOK

3D TEXTURING

Although LightWave has one of the best 3D texturing engines, there will be situations where the 3D artist will want absolute control of the look and feel of a 3D object's surface. One of the most used graphics application is Photoshop. In this case, I am using the new Photoshop CS. I have found it to be excellent in the handling of both photographic and custom-created textures. For this tutorial we are going to custom create all of our textures in Photoshop.

I chose to model, texture and setup a scene portraying a workspace using one of the most essential tools for creating in Photoshop ... the WACOM tablet, which I use regularly. Why? Because that was the way I was raised to draw, paint or write, so the tablet allows me to create more intuitively in the technical environment of Photoshop and LightWave.

In writing this and future articles on texturing using Photoshop, I hope to instill an understanding of the program so that the artist can intuitively and creatively apply it to anything that they are working on.

A WORD ABOUT THE COMPOSITION

Being a professional photographer for 24 years, I have had a fascination with 3D animation. LightWave has helped me fulfill my interests in taking my photographic insights into a new direction. For me, paying attention to good composition, dynamic lighting, and a theme that will make a statement about what I am illustrating helps me in creating effective product shots for my clients.

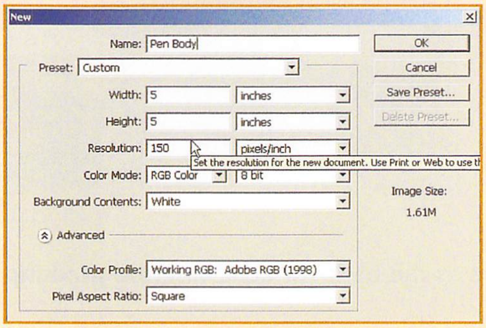
In this example, my goal was to position each object so that it appeared to reach out into the camera and draw the viewer into the surrounding imagery. So, in the same spirit, I placed them in Layout and applied a lens focal length that I might have used on a live photo shoot.

BASIC COLOR TEXTURING

Now let's do some texturing. After studying the actual equipment, I noticed that the majority of the surfaces were very similar. The monitor, tablet, pen and pen resevoir were practically identical in nature, so let's start creating that surface.

Since we are dealing with a surface that will have a consistent feel, it is usually a good idea to start with a square format which gives us the option to make our textures seamless.

1. We are going to start by creating the surface color that will be used for the tablet and pen objects. Access File>New to create a new file. In the Create New File dialogue box, give your file a 5x5 inch at 150 PPI (pixels per inch). This will give you a width and height pixel dimension of 750x750. Use the settings that are shown in Image 1 for now and click OK.


New
OK
Cancel
Save Preset...
Delete Preset...
Set the resolution for the new document. Use Print or Web to use t

Name: Pen Body
Preset: Custom
Width: 5 inches
Height: 5 inches
Resolution: 150 pixels/inch
Color Mode: RGB Color 8 bit
Background Contents: White
Advanced
Color Profile: Working RGB: Adobe RGB (1998)
Pixel Aspect Ratio: Square
Image Size: 1.61M

IMAGE 1

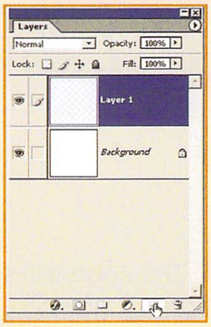
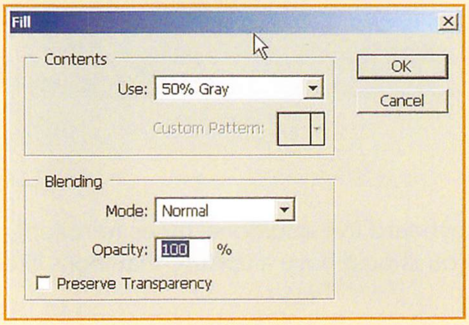

Layers
Normal
Opacity: 100%
Lock:
Fill: 100%
Layer 1
Background

IMAGE 2

2. The use of layers in Photoshop is one of the most powerful and practical applications to both compositing and texturing. Why? Because now we can create any object that we choose and use any of Photoshop's tools or commands on each object independently from the entire scene.

3. On the bottom of your layer palette, click on the icon next to the trash can symbol (Image 2) to create a new layer. The checkered pattern that we now see denotes a blank fresh layer ready for editing. Let's fill this with medium gray (Edit>Fill) (Image 3 and 4)


Fill
OK
Cancel

Contents
Use: 50% Gray
Custom Pattern:
Blending
Mode: Normal
Opacity: 100 %
☐ Preserve Transparency

IMAGE 3

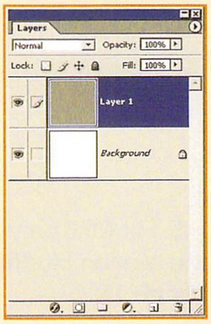

Layers
Normal
Opacity: 100%
Lock:
Fill: 100%
Layer 1
Background

IMAGE 4

4. The general surface of the pad and monitor has a stippled metallic look to it, so let's break up the solid gray color of layer 1 with some noise (Filter>Noise>Add Noise) (Image 5 &6). I chose approximately 22% for my noise. Make sure that the Monochromatic box is checked.

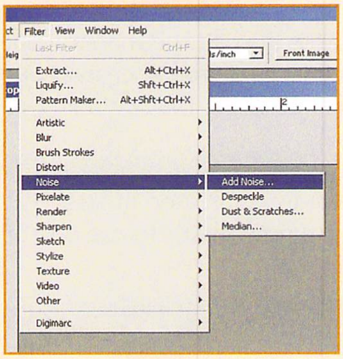

Filter
View
Window
Help
Last Filter Ctrl+F
Extract... Alt+Ctrl+X
Liquify... Shft+Ctrl+X
Pattern Maker... Alt+Shft+Ctrl+X
Artistic
Blur
Brush Strokes
Distort
Noise
Pixelate
Render
Sharpen
Sketch
Stylize
Texture
Video
Other
Digimarc
Add Noise...
Despeckle
Dust & Scratches...
Median...
Front Image

IMAGE 5

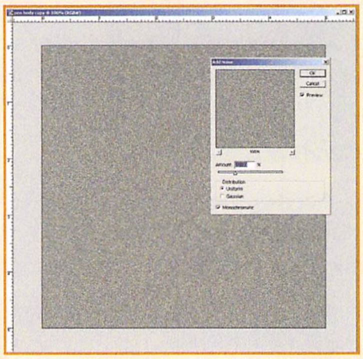
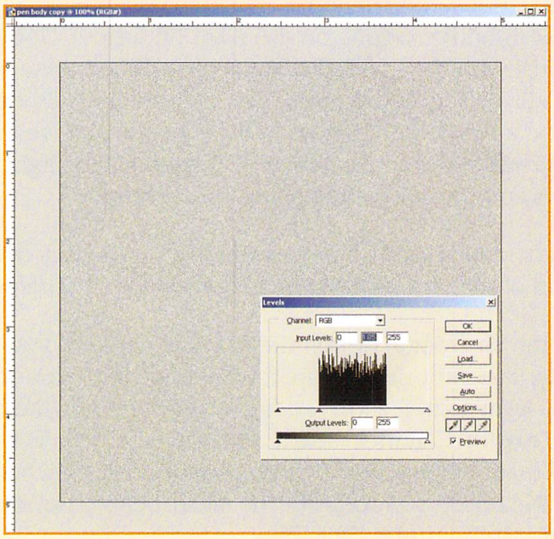


IMAGE 6

5. The general tonality of the image is a little too dark, especially after adding the noise. The color of the surface should really be a metallic silver, so to bring the image back into balance toward a lighter gray, I used the Levels command. (Image>Adjust>Levels). (Image 7)


Levels
OK
Cancel
Load...
Save...
Auto
Options...
Preview

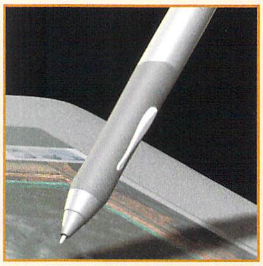
Channel: RGB
Input Levels: 0 255
Output Levels: 0 255

IMAGE 7

We are now looking at the histogram that represents the tonal information of the layer that is selected. If the graph records higher over a specific region of gray that means there is more of that tonality present in the image. So on layer 1 there are no black or white tonalities, but we have a great amount of midtown. So, we will brighten up the midtones with the gama slider. At the base of the histogram, leave your black and white sliders where they are, move the middle slider slightly to the left to remove the midtones, and watch your image shift closer to light gray. Click OK.

Our basic surface is done. We will not only use this for the color surface but for the specular and diffusion surfaces, as well. Now let's have some fun creating texture for the pen grip.

TEXTURE FOR THE PEN GRIP



The rubber grip of the WACOM pen required that I pay close attention not only to its surface texture, but also how it reflects light. The rubber has a texture very similar to the pad and monitor, but it's much finer and smoother than our Basic Color texture in the beginning of this tutorial.

Access the Basic Color Texture that we created in step 3 at the beginning of the tutorial. We are now going to use one of the channels to create a bump surface.

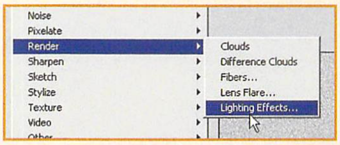
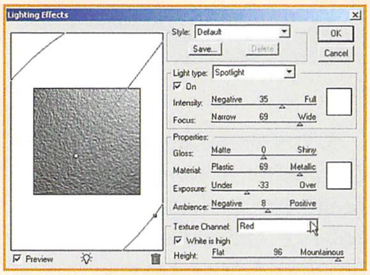

Noise
Pixelate
Render
Sharpen
Sketch
Stylize
Texture
Video
Other
Clouds
Difference Clouds
Fibers...
Lens Flare...
Lighting Effects...

IMAGE 8


Lighting Effects
OK
Cancel
Save...
Delete
Properties:

Style: Default
Light type: Spotlight
☑ On
Intensity: Negative 35 Full
Focus: Narrow 69 Wide
Gloss: Matte 0 Shiny
Material: Plastic 69 Metallic
Exposure: Under -33 Over
Ambience: Negative 8 Positive
Texture Channel: Red
☑ White is high
Height: Flat 96 Mountainous
☑ Preview

IMAGE 9

Access the Filter> Render> Lighting Effects (Image 8). Your image will be in a preview window on the left and your lighting options on the right (Image 9). Under Light Type, stick with the Spotlight; however, you can play with the other settings to get the effect you like the best. By default it gives you a single light source. This is exactly all we need for now. The white dot in the center of the oval is the light source direction and the surrounding oval is the falloff.

The light source itself is represented as a single black dot on the perimeter of the oval with a line joining it to the directional point.

Place the directional dot on the lower left side of your image and drag the light source up toward the right side to get a diagonal light source. Now we are going to create the texture. Under Texture Channel, select the red channel. This is the channel that will give you a more pronounced effect. You can control the raised surface with the slider below. I placed mine all the way to the right. Click OK.

We now have our final effect as a raised texture (Image 10). Just like LightWave, Photoshop used the gray values to produce the 3D effect. By using the tonal information in the Red channel, it designated the highlights as the raised surfaces and the shadows as the receding surfaces. We will use this for both the color and the bump texture for the pen grip in LightWave. Let's continue on and create our wood texture.

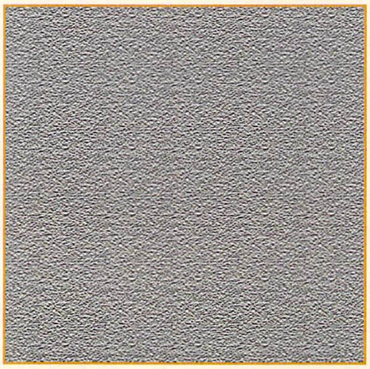
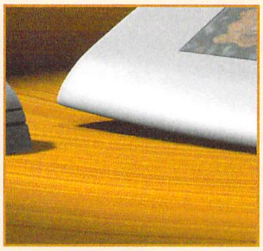


IMAGE 10

GLOSSY WOODEN TABLE SURFACE



The goal here is to create texture that will give us the look of wood for the desk surface.

1. Start by creating a new image with the same dimensions as in the previous steps.

2. Make a new layer and fill it with a brownish color of your choice. This will represent the base color of your wood.

3. Add noise (Filter>Noise>Add Noise) with the Monochromatic box checked. I used a radius of 57 in this case. (Images 11 & 12)

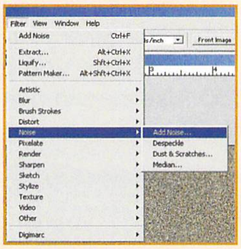

Filter
View
Window
Help
Add Noise Ctrl+F
Extract... Alt+Ctrl+X
Liquify... Shft+Ctrl+X
Pattern Maker... Alt+Shft+Ctrl+X
Artistic
Blur
Brush Strokes
Distort
Noise
Pixelate
Render
Sharpen
Sketch
Stylize
Texture
Video
Other
Digimarc
Add Noise...
Despeckle
Dust & Scratches...
Median...
Front Image

IMAGE 11

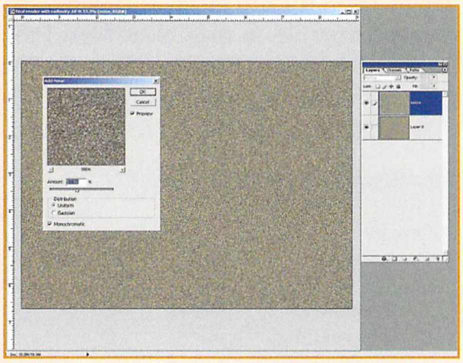

Add Noise
OK
Cancel
Preview
Monochromatic

IMAGE 12

The noise will serve as the basis for achieving the grouting contour of wood.

4. Access the Motion blur and apply the settings as shown below. Take your slider all the way to the right to achieve an extreme effect. (Images 13 & 14)

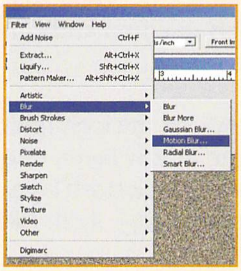

Filter
View
Window
Help
Add Noise Ctrl+F
Extract... Alt+Ctrl+X
Liquify... Shft+Ctrl+X
Pattern Maker... Alt+Shft+Ctrl+X
Artistic
Blur
Brush Strokes
Distort
Noise
Pixelate
Render
Sharpen
Sketch
Stylize
Texture
Video
Other
Digimarc
Blur
Blur More
Gaussian Blur...
Motion Blur...
Radial Blur...
Smart Blur...

IMAGE 13

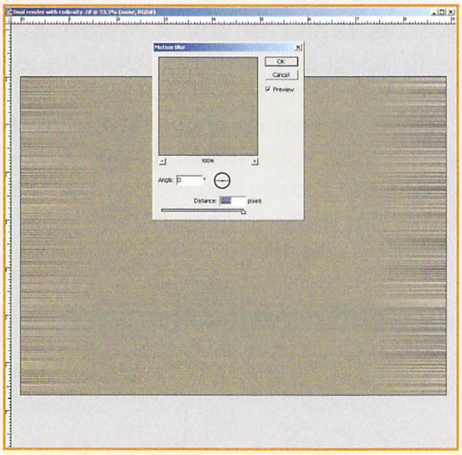

Motion Blur
OK
Cancel
Preview
Angle:
Distance:
pixels

IMAGE 14

5. Hit Ctl F on your keyboard five additional times to reapply the Motion blur filter. You should have a texture that looks like image 15.

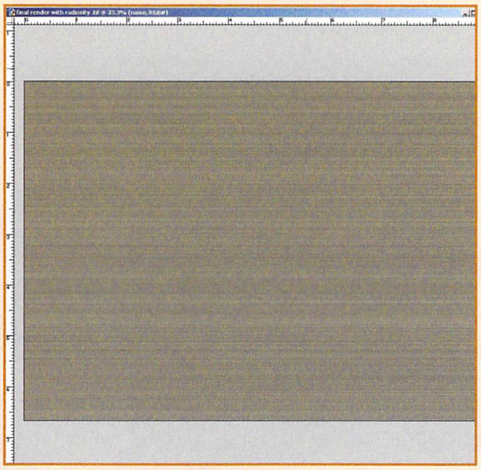
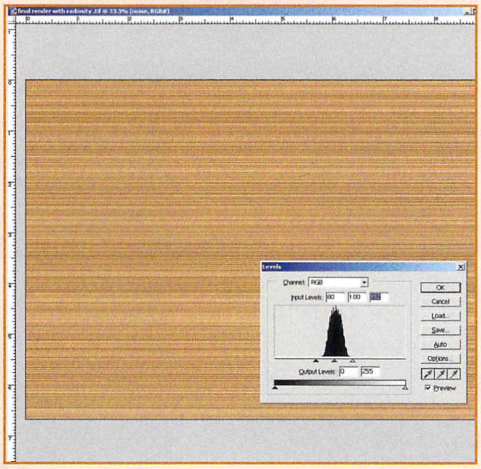


IMAGE 15

6. Our wood needs some definition to it, so hit Ctl L (Image>Adjust>Levels) to access the levels and bring the black and white slider to the base of the curve as shown in image 16. Now we are starting to gain some character for our wood.


Levels
OK
Cancel
Load...
Save...
Auto
Options...
Preview

Channel: RGB
Input Levels: 80 1.00 [illegible]
Output Levels: 0 255
☑ Preview

IMAGE 16

If you look closely at most wood it has soft rounded peaks, not harsh sharp ones. To mimic this, let's add some Gaussian Blur (Filter> Blur> Gaussian). I used a setting of 2 pixels. (Image 17 & 18)

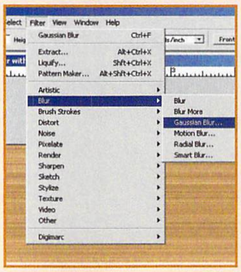
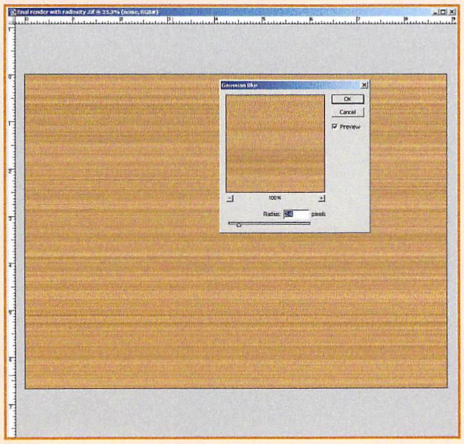

Filter
View
Window
Help
Gaussian Blur Ctrl+F
Extract... Alt+Ctrl+X
Liquify... Shft+Ctrl+X
Pattern Maker... Alt+Shft+Ctrl+X
Artistic
Blur
Brush Strokes
Distort
Noise
Pixelate
Render
Sharpen
Sketch
Stylize
Texture
Video
Other
Digimarc
Blur
Blur More
Gaussian Blur...
Motion Blur...
Radial Blur...
Smart Blur...

IMAGE 17


Gaussian Blur
OK
Cancel
Preview
100%

Radius: [illegible] pixels
☑ Preview

IMAGE 18

ADDING ADDITIONAL CHARACTER TO THE WOOD

We are going to create some further detail with the Liquify tool (Filters>Liquify). (Image 19)

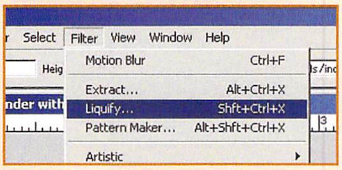
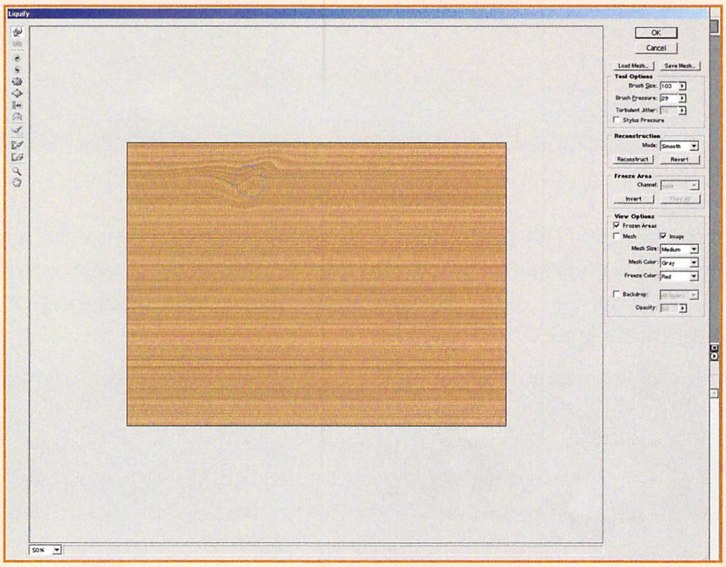

Select
Filter
View
Window
Help
Motion Blur Ctrl+F
Extract... Alt+Ctrl+X
Liquify... Shft+Ctrl+X
Pattern Maker... Alt+Shft+Ctrl+X
Artistic

IMAGE 19

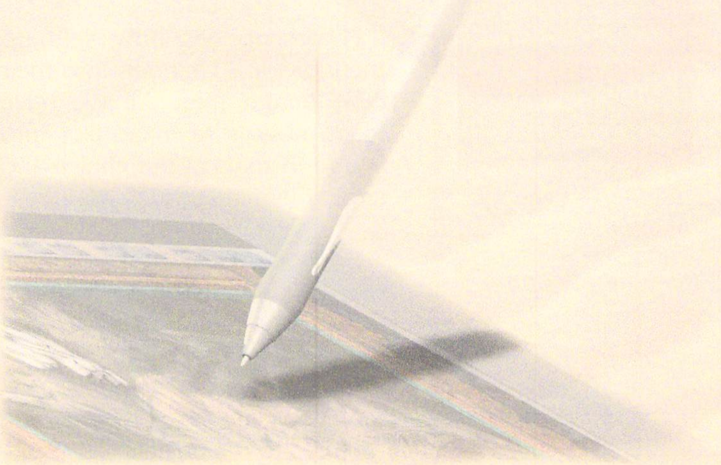
1. Now, a whole new effects program will allow us to apply some needed detail. On the left side of the interface, you have brushes that will apply warping, twisting, waving, and exploding effects.


Liquify
OK
Cancel
Load Mesh...
Save Mesh...
Tool Options
Reconstruction
Reconstruct
Revert
Freeze Area
Invert
Thaw All
View Options
50%

Brush Size: 103
Brush Pressure: 29
Turbulent Jitter: 70
☐ Stylus Pressure
Mode: Smooth
Channel: none
☑ Frozen Areas
☐ Mesh ☑ Image
Mesh Size: Medium
Mesh Color: Gray
Freeze Color: Red
☐ Backdrop: All layers
Opacity: 50

IMAGE 20

Apply them as you see fit to create the wood texture of your liking. I used the wave Brush (2nd down) then applied a variety of wrap, wave and twist. (Image 20)



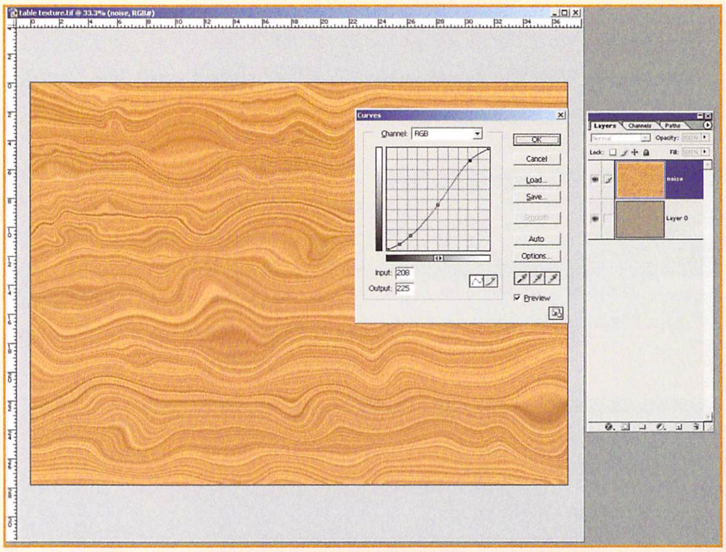


table texture.tif @ 33.3% (noise, RGB#)
Curves
OK
Cancel
Load...
Save...
Smooth
Auto
Options...
Preview
Layers
Channels
Paths
noise
Layer 0

Channel: RGB
Input: 208
Output: 225

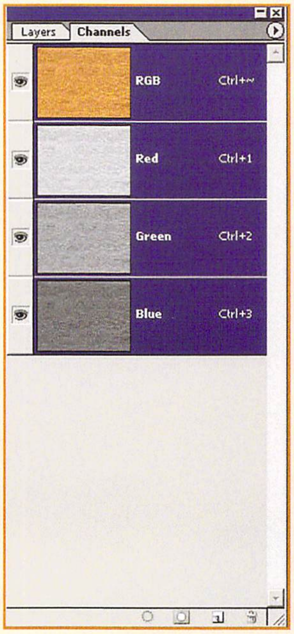
IMAGE 21

2. All that's left to do now is to accentuate its contrast. The Curves work well for this. Save your texture as a .tif with your layers intact, in case you would want to make additions or alterations later on. (Image 21)

NOTE: As a general rule, duplicate your final work and save one with layers and flatten the other. This flattened image will be saved out as a format of your choice whether that would be .iff, .tif, .tga or .png.

USING CHANNELS FOR TEXTURE

Channels in Photoshop are nothing more than images made up of 256 shades of gray, which makes them ideal for creating diffusion and specular maps. All we need to do is split them up into their own image files. To do this, make sure that the file is flattened. Click on the black triangle on the top right corner of the channels pallet. Click on Split Channels.


Layers
Channels

RGB	Ctrl+~
Red	Ctrl+1
Green	Ctrl+2
Blue	Ctrl+3

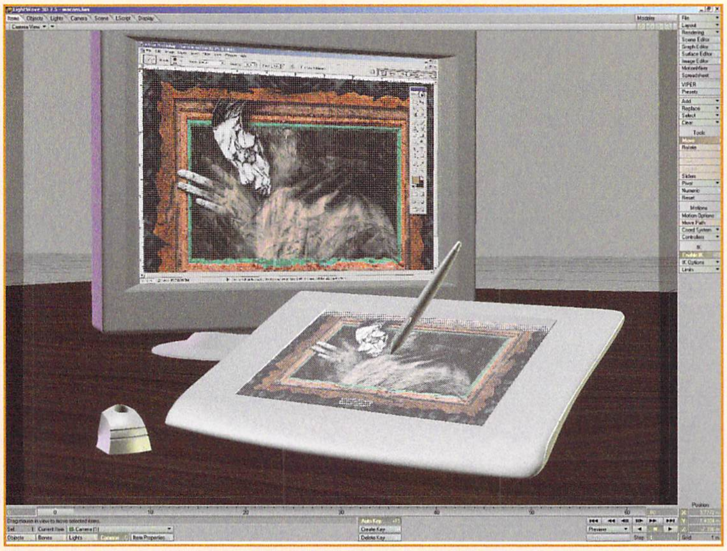
CHANNELS

Photoshop has now split up the individual channels into their own image files. All we have to do now is save the files into image formats of our choice and apply them in LightWave.

I chose the Red channel for my specular map and the Green channel I used as my diffusion map.

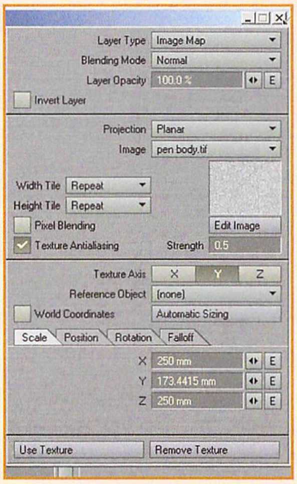
Now we are ready to apply the textures to the objects.

APPLYING THE TEXTURING IN LIGHTWAVE



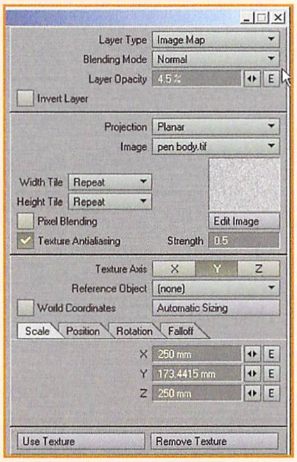
Well, here's my scene. Fairly simple in composition; however, it comes to life when we add the surfaces.

LIGHTWAVE SURFACE SETTINGS FOR WACOM TABLET


Edit Image
Scale
Position
Rotation
Falloff
Use Texture
Remove Texture

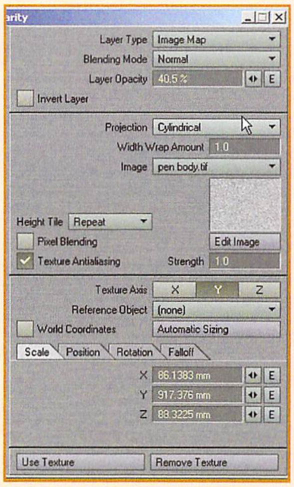
Layer Type: Image Map
Blending Mode: Normal
Layer Opacity: 100.0 %
☐ Invert Layer
Projection: Planar
Image: pen body.tif
Width Tile: Repeat
Height Tile: Repeat
☐ Pixel Blending
☑ Texture Antialiasing
Strength: 0.5
Texture Axis: X [✓ Y] Z
Reference Object: (none)
☐ World Coordinates
Automatic Sizing
X: 250 mm
Y: 173.4415 mm
Z: 250 mm

COLOR


Edit Image
Scale
Position
Rotation
Falloff
Use Texture
Remove Texture

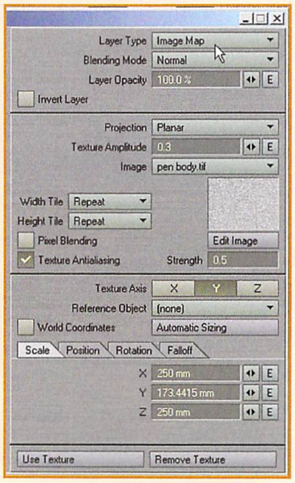
Layer Type: Image Map
Blending Mode: Normal
Layer Opacity: 4.5 %
☐ Invert Layer
Projection: Planar
Image: pen body.tif
Width Tile: Repeat
Height Tile: Repeat
☐ Pixel Blending
☑ Texture Antialiasing
Strength: 0.5
Texture Axis: X [✓ Y] Z
Reference Object: (none)
☐ World Coordinates
Automatic Sizing
X: 250 mm
Y: 173.4415 mm
Z: 250 mm

DIFFUSION


arity
Edit Image
Scale
Position
Rotation
Falloff
Use Texture
Remove Texture

Layer Type: Image Map
Blending Mode: Normal
Layer Opacity: 40.5 %
☐ Invert Layer
Projection: Cylindrical
Width Wrap Amount: 1.0
Image: pen body.tif
Height Tile: Repeat
☐ Pixel Blending
☑ Texture Antialiasing
Strength: 1.0
Texture Axis: X [✓ Y] Z
Reference Object: (none)
☐ World Coordinates
Automatic Sizing
X: 86.1383 mm
Y: 917.376 mm
Z: 88.3225 mm

SPECULARITY


Edit Image
Scale
Position
Rotation
Falloff
Use Texture
Remove Texture

Layer Type: Image Map
Blending Mode: Normal
Layer Opacity: 100.0 %
☐ Invert Layer
Projection: Planar
Texture Amplitude: 0.3
Image: pen body.tif
Width Tile: Repeat
Height Tile: Repeat
☐ Pixel Blending
☑ Texture Antialiasing
Strength: 0.5
Texture Axis: X [✓ Y] Z
Reference Object: (none)
☐ World Coordinates
Automatic Sizing
X: 250 mm
Y: 173.4415 mm
Z: 250 mm

BUMP

Now, this is the simple part. By hitting Ctl f3 to activate the surface panel, I applied the Basic Color Map by clicking on the "T" next to the Color surface dialogue. Take notice of the screen shots of the settings I chose. I applied my surface using the Basic Color Map that was created in Photoshop on the Y-axis and I made sure that the Automatic Sizing was selected. Finally, I checked the Texture Anti-aliasing.

From this point on, I copied this texture and pasted it into the texture channels for the diffuse, specularity and the bump. By playing with the strength, layer opacity and amplitudes, I arrived at a fairly convincing result.

TEXTURING FOR *WACOM* PEN BODY

The initial Specularity of 34% and Glossiness of 28% (Image 1) was arrived at through trial and error. I just played with the settings until the final result matched what I observed with the real thing.

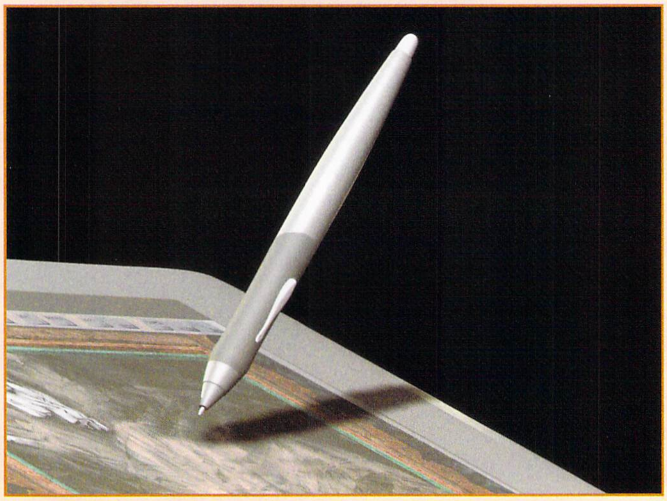


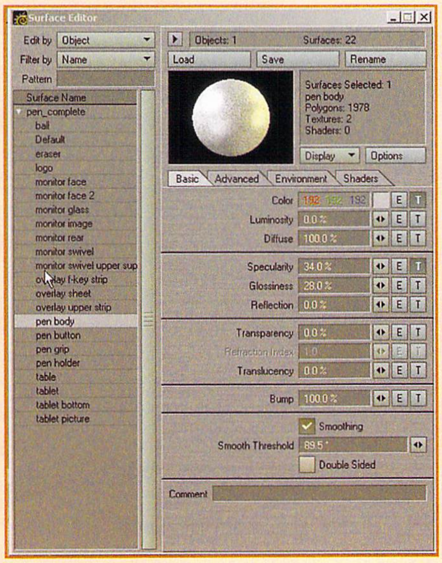
IMAGE 1

PEN COLOR SETTINGS

I copied the color settings of the Tablet to the pen and changed the texture on the Y-axis from Planar to Cylindrical. (Image 2)

PEN SPECULARITY SETTINGS

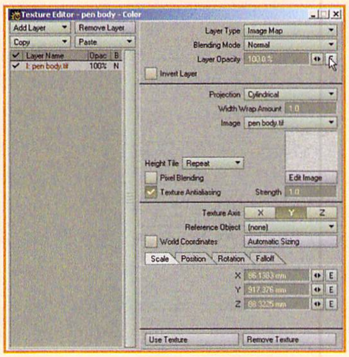
I copied the specularity settings of the Tablet to the pen and changed the texture on the Y-axis from Planar to Cylindrical (Image 3)



Surface Editor
Edit by: Object
Filter by: Name
Objects: 1 Surfaces: 22
Surfaces Selected: 1
pen body
Polygons: 1978
Textures: 2
Shaders: 0
Color: 192 192 192
Luminosity: 0.0 %
Diffuse: 100.0 %
Specularity: 34.0 %
Glossiness: 28.0 %
Reflection: 0.0 %
Transparency: 0.0 %
Refraction Index: 1.0
Translucency: 0.0 %
Bump: 100.0 %
☑ Smoothing
Smooth Threshold: 89.5 °
☐ Double Sided

Surface Name
pen_complete
ball
Default
eraser
logo
monitor face
monitor face 2
monitor glass
monitor image
monitor rear
monitor swivel
monitor swivel upper sup
overlay f-key strip
overlay sheet
overlay upper strip
pen body
pen button
pen grip
pen holder
table
tablet
tablet bottom
tablet picture
Load
Save
Rename
Display
Options
Basic
Advanced
Environment
Shaders
Comment

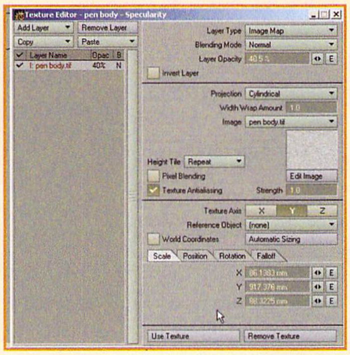
OVERALL PEN SETTINGS



Texture Editor - pen body - Color
✓ 1: pen body.tif 100% N
Layer Type: Image Map
Blending Mode: Normal
Layer Opacity: 100.0 %
☐ Invert Layer
Projection: Cylindrical
Width Wrap Amount: 1.0
Image: pen body.tif
Height Tile: Repeat
☐ Pixel Blending
☑ Texture Antialiasing
Strength: 1.0
Texture Axis: Y
Reference Object: (none)
☐ World Coordinates
X: 86.1383 mm
Y: 917.376 mm
Z: 88.3225 mm

Add Layer
Remove Layer
Copy
Paste
Layer Name
Opac
B
Edit Image
Automatic Sizing
Scale
Position
Rotation
Falloff
Use Texture
Remove Texture

IMAGE 2

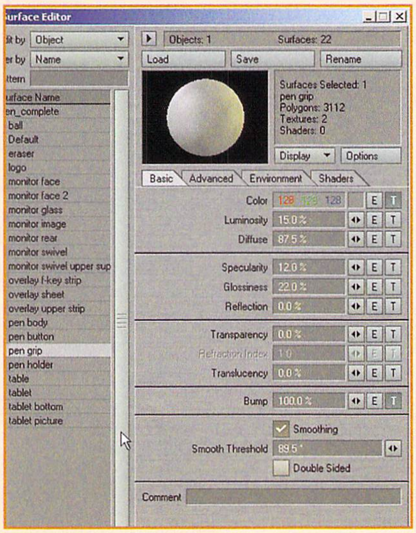


Texture Editor - pen body - Specularity
✓ 1: pen body.tif 40% N
Layer Type: Image Map
Blending Mode: Normal
Layer Opacity: 40.5 %
☐ Invert Layer
Projection: Cylindrical
Width Wrap Amount: 1.0
Image: pen body.tif
Height Tile: Repeat
☐ Pixel Blending
☑ Texture Antialiasing
Strength: 1.0
Texture Axis: Y
Reference Object: (none)
☐ World Coordinates
X: 86.1383 mm
Y: 917.376 mm
Z: 88.3225 mm

IMAGE 3

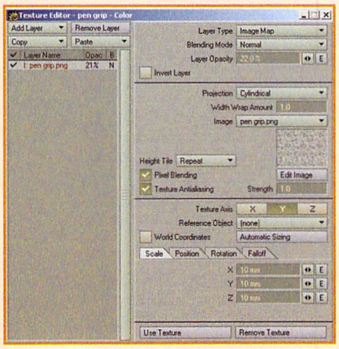
THE PEN RUBBER GRIP

The pen Grip texture was applied once again on the Y-axis with a Cylindrical projection. Since the texture was seamless, I set the Height Tile to repeat.



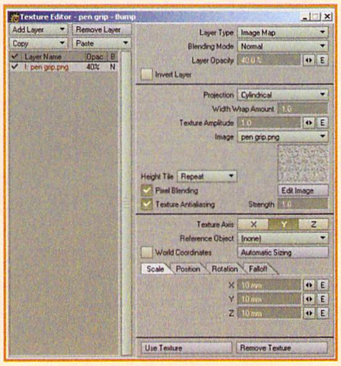
Surface Editor
Objects: 1 Surfaces: 22
Surfaces Selected: 1
pen grip
Polygons: 3112
Textures: 2
Shaders: 0
Color: 128 128 128
Luminosity: 15.0 %
Diffuse: 87.5 %
Specularity: 12.0 %
Glossiness: 22.0 %
Reflection: 0.0 %
Transparency: 0.0 %
Refraction Index: 1.0
Translucency: 0.0 %
Bump: 100.0 %
☑ Smoothing
Smooth Threshold: 89.5 °
☐ Double Sided

OVERALL PEN GRIP SETTINGS



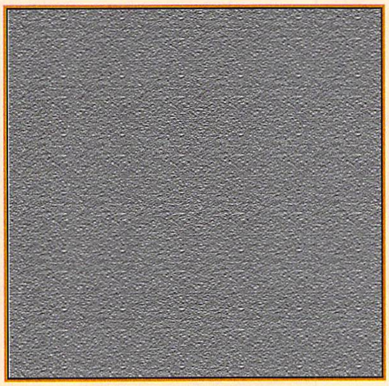
Texture Editor - pen grip - Color
✓ 1: pen grip.png 21% N
Layer Type: Image Map
Blending Mode: Normal
Layer Opacity: 22.0 %
☐ Invert Layer
Projection: Cylindrical
Width Wrap Amount: 1.0
Image: pen grip.png
Height Tile: Repeat
☑ Pixel Blending
☑ Texture Antialiasing
Strength: 1.0
Texture Axis: Y
Reference Object: (none)
☐ World Coordinates
X: 10 mm
Y: 10 mm
Z: 10 mm

PEN GRIP COLOR SETTINGS



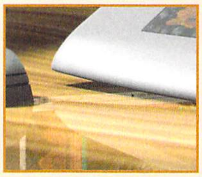
Texture Editor - pen grip - Bump
✓ 1: pen grip.png 40% N
Layer Type: Image Map
Blending Mode: Normal
Layer Opacity: 40.0 %
☐ Invert Layer
Projection: Cylindrical
Width Wrap Amount: 1.0
Texture Amplitude: 1.0
Image: pen grip.png
Height Tile: Repeat
☑ Pixel Blending
☑ Texture Antialiasing
Strength: 1.0
Texture Axis: Y
Reference Object: (none)
☐ World Coordinates
X: 10 mm
Y: 10 mm
Z: 10 mm

PEN GRIP BUMP SETTINGS

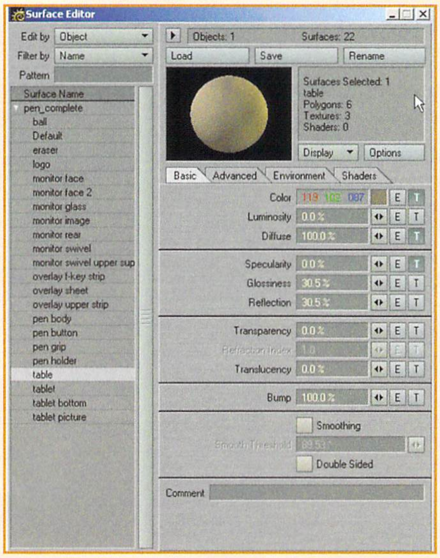


PEN GRIP TEXTURE

TEXTURING THE TABLE



Now it's time to add some details to the table. On the main surfacing menu, I set the Glossiness and Reflection to 30.5% (Image 4). The setting will give the table the glass-like reflective gloss that I wanted. Using the wood texture created in Photoshop, I entered the texture editor for the Color and mapped it onto the Y-axis. The same settings were applied for both the Diffusion and Specular texture settings. I included screen shots of each setting below.



Surface Editor

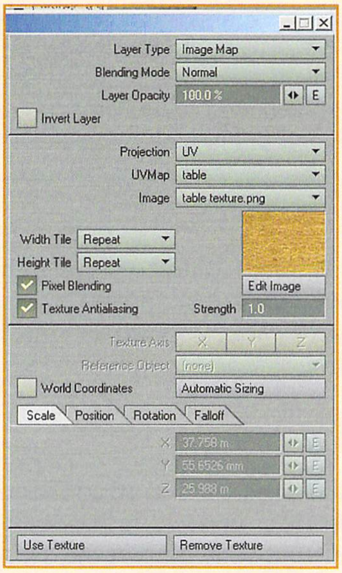
Edit by: Object
Filter by: Name
Pattern:
Objects: 1
Surfaces: 22

Surface Name
- pen_complete
  - ball
  - Default
  - eraser
  - logo
  - monitor face
  - monitor face 2
  - monitor glass
  - monitor image
  - monitor rear
  - monitor swivel
  - monitor swivel upper sup
  - overlay f-key strip
  - overlay sheet
  - overlay upper strip
  - pen body
  - pen button
  - pen grip
  - pen holder
  - table
  - tablet
  - tablet bottom
  - tablet picture

Surfaces Selected: 1
table
Polygons: 6
Textures: 3
Shaders: 0

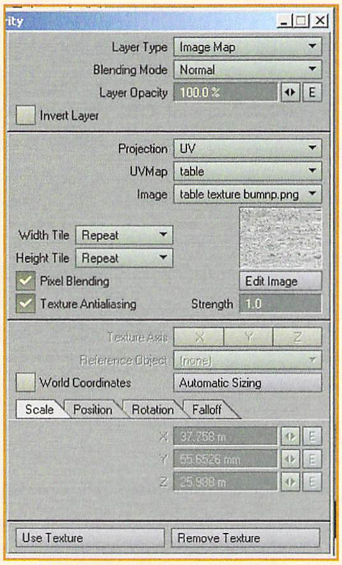
Color: 119 102 087
Luminosity: 0.0 %
Diffuse: 100.0 %
Specularity: 0.0 %
Glossiness: 30.5 %
Reflection: 30.5 %
Transparency: 0.0 %
Refraction Index: 1.0
Translucency: 0.0 %
Bump: 100.0 %
☐ Smoothing
Smooth Threshold: 89.53°
☐ Double Sided
Comment:

IMAGE 4



Layer Type: Image Map
Blending Mode: Normal
Layer Opacity: 100.0 %
☐ Invert Layer
Projection: UV
UVMap: table
Image: table texture.png
Width Tile: Repeat
Height Tile: Repeat
☑ Pixel Blending
☑ Texture Antialiasing
Strength: 1.0
Texture Axis: X Y Z
Reference Object: (none)
☐ World Coordinates
X: 37.758 m
Y: 55.6526 mm
Z: 25.988 m

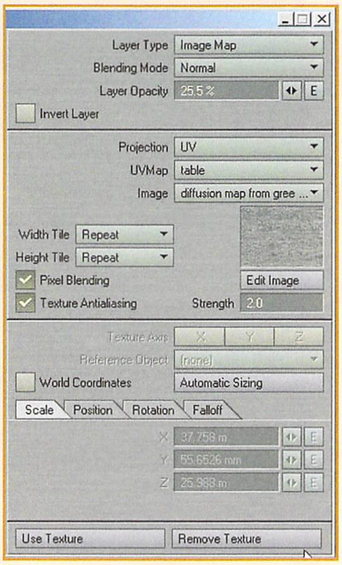
TABLE COLOR SETTINGS



Layer Type: Image Map
Blending Mode: Normal
Layer Opacity: 100.0 %
☐ Invert Layer
Projection: UV
UVMap: table
Image: table texture bumnp.png
Width Tile: Repeat
Height Tile: Repeat
☑ Pixel Blending
☑ Texture Antialiasing
Strength: 1.0
Texture Axis: X Y Z
Reference Object: (none)
☐ World Coordinates
X: 37.758 m
Y: 55.6526 mm
Z: 25.988 m

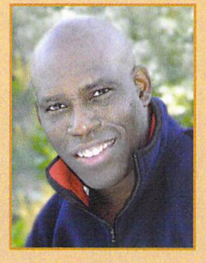
TABLE SPECULARITY SETTINGS

Well, that should do it. It's ready for the render. Just one last note— radiosity was applied to the final render to give a stronger sense of depth. ■

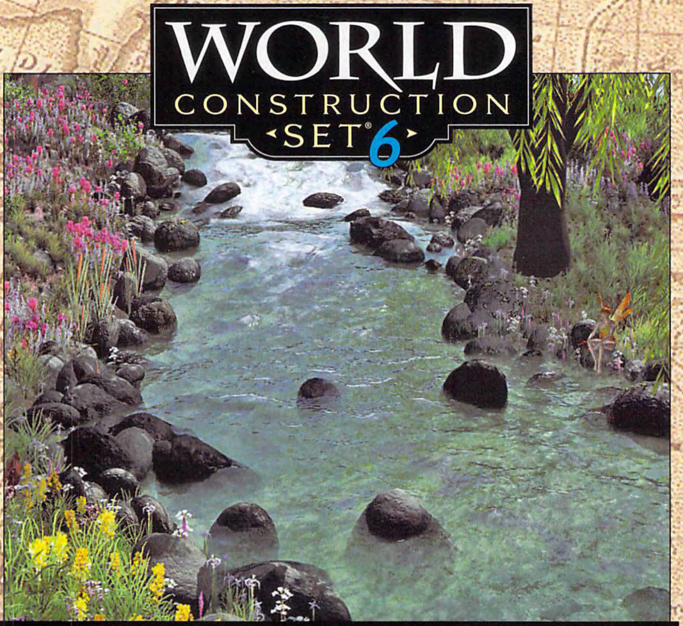


Layer Type: Image Map
Blending Mode: Normal
Layer Opacity: 25.5 %
☐ Invert Layer
Projection: UV
UVMap: table
Image: diffusion map from gree ...
Width Tile: Repeat
Height Tile: Repeat
☑ Pixel Blending
☑ Texture Antialiasing
Strength: 2.0
Texture Axis: X Y Z
Reference Object: (none)
☐ World Coordinates
X: 37.758 m
Y: 55.6526 mm
Z: 25.988 m

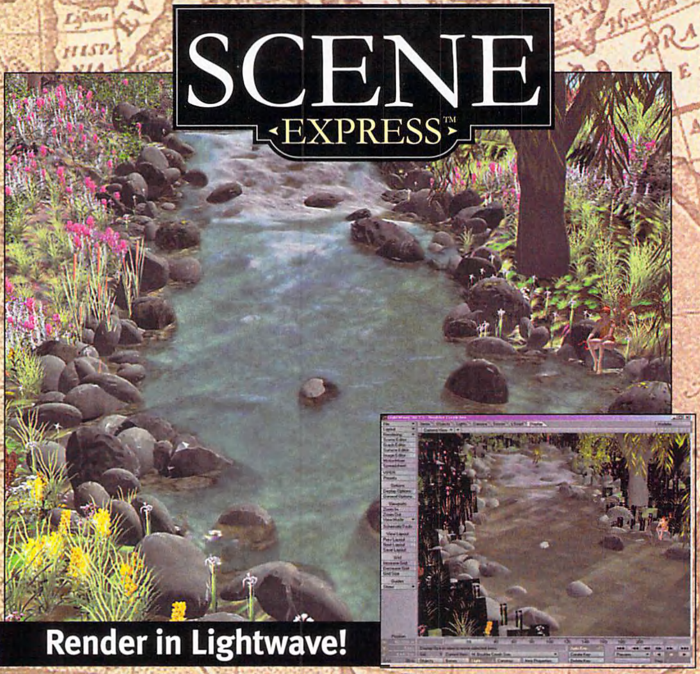
TABLE DIFFUSION SETTINGS



STEPHEN BURNS HAS DISCOVERED THE SAME PASSION FOR THE DIGITAL MEDIUM AS HE HAS FOR PHOTOGRAPHY AS AN ART FORM. HIS BACKGROUND BEGAN AS A PHOTOGRAPHER 22 YEARS AGO AND IN TIME, PROGRESSED TOWARD THE DIGITAL MEDIUM. STEPHEN HAS BEEN A CORPORATE INSTRUCTOR AND LECTURER IN THE APPLICATION OF DIGITAL ART AND DESIGN FOR THE PAST 8 1/2 YEARS. HE HAS BEEN EXHIBITING DIGITAL FINE ART INTERNATIONALLY AT GALLERIES SUCH AS DURBAN ART MUSEUM IN SOUTH AFRICA, CITIZENS GALLERY IN YOKAHAMA, JAPAN, AND CECUT MUSEUM OF MEXICO TO NAME A FEW. PART OF HIS EXHIBITING WON HIM 1ST PLACE IN THE PRESTIGIOUS SEYBOLD INTERNATIONAL DIGITAL ARTS CONTEST. OWNER OF BURNS DESIGN, HE TEACHES DIGITAL MANIPULATION WORKSHOPS IN THE SAN DIEGO AREA AND NATIONWIDE. HIS TEACHING STYLE COMES FROM HIS ABILITY TO SHARE AN UNDERSTANDING OF PHOTOSHOP SO THAT THE STUDENT HAS THE ABILITY TO INTUITIVELY APPLY IT TO HIS/HER'S CREATIONS.



Create in World Construction Set...



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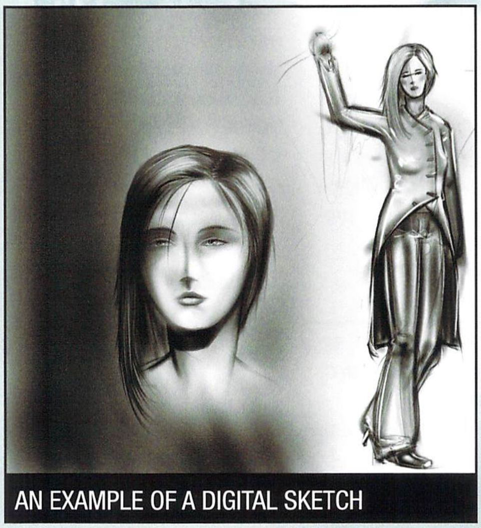
DRAWING IN THE DIGITAL AGE;
ALIAS SKETCHBOOK PRO REVIEW

BY AKIKO ASHLEY

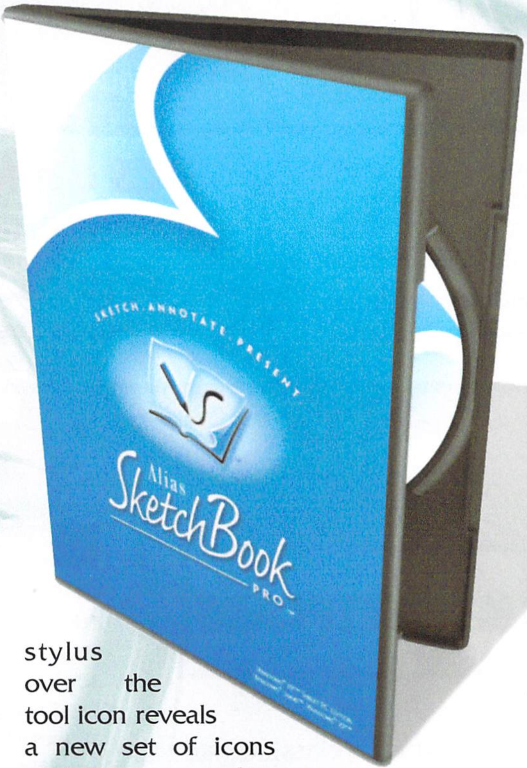
ALIAS' SKETCHBOOK PRO BRINGS THE FLEXIBILTY OF THE DIGITAL AGE TO ARTISTS THAT WORK WITH TRADITIONAL ART TOOLS.

Alias/Wavefront, a Silicon Graphics Inc. company, announced on its 20th anniversary the launch of a corporate identity name change from Alias/Wavefront to Alias. Alias is a simple yet powerful name known throughout the 3D industry and beyond. Alias introduced a recent addition to their line of new technology applications for artists called "SketchBook Pro." SketchBook Pro is a software application used in combination with a Tablet PC or graphics tablet to create a digital sketchbook for artists.

SketchBook Pro is an easy to use, fast loading application that any artist can learn to use quickly. The most common uses for the application are sketching, writing annotations on images and doing presentations using a tablet to sketch ideas. Have you ever received an image while in production and needed to make notes because it wasn't what you wanted? SketchBook Pro works with layers so that you can write notes without damaging the original image. The interface of the application is designed to make using the software easy and intuitive to the way an artist thinks. The tool palette occupies a small corner of the screen. You can move the palette to the opposite side of the screen or shrink the palette for more screen space for drawing. The "marking menus" make it easy for artists to access tools by the flick of a pen. Pressing the stylus over the tool icon reveals a new set of icons that pop up, stroking toward the icon accesses the tool. As you become familiar with the tool palette, you don't even need to see the menu; just use a stroke of the pen and you have the tool you need.



AN EXAMPLE OF A DIGITAL SKETCH

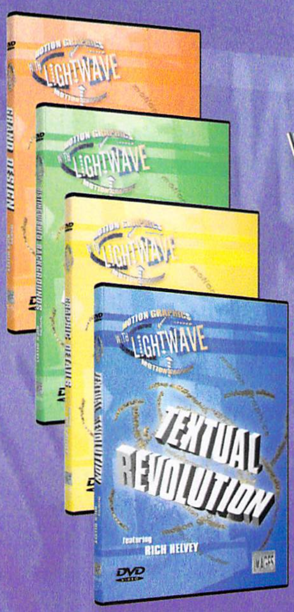


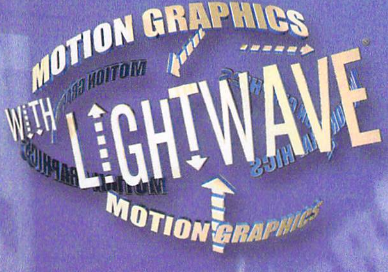
The heart of the software is the collection of high quality digital brushes including pencils, pens, paintbrushes, airbrushes and erasers. The software allows quick responsiveness and a high quality look from the brush tools, even with larger sized brushes. The "brush selector" gives you access to a set of 28 brushes, including four sizes of pencil, paintbrush, airbrush, marker, smear tool and eraser. It also comes with two preset ballpoint pens and calligraphic pens. The "custom tab" allows users to create their own set of brushes to expand their creative world. The "color marking" menu gives users the ability to choose primary colors with the flick of a stylus. A compact color selector is included that gives the users a full range of color hues, saturation and values. There are many nifty features and expandable toolsets that you will find that make working as a digital artist fun and creative. This review only touches on a few of those possibilities. I was amazed you can undo up to 50 brushstrokes or actions. There is a screen capture utility that allows users to capture the screen of any Windows application. Must I say more?

Alias has introduced an innovative tool for storyboard artists, cartoonists, art directors, industrial designers, architects, web designers and more. This is a software application that works with a variety of pipelines and thinks the way a creative person thinks. This is a new way to think about sketching and drawing. It brings the flexibility of the digital world to those who work with traditional art tools. It is available at any Alias reseller for $199. This is good value for this versatile software with a lot of power.

For more information about Alias or SketchBook Pro, please go to www.alias.com. ■

Better Graphics in Less Time!





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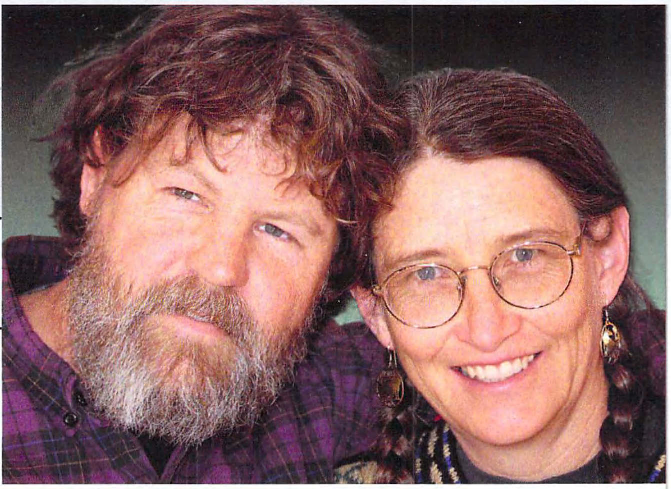

BEING ORGANIZED AND OTHER MYTHS

BY ANDREA CARVEY

THIS ARTICLE HAD A VERY CLEVER PHRASE TO GO HERE...IF I COULD ONLY FIND WHERE I PUT IT!

O.K., I'm in the middle of a meeting and attempt to access a file that I've prepared beforehand, all nice and tidy. Oops! Uh, that's not it! Wrong version. How about this one? Nope. Gosh darn it, where is it? Maybe I put it in…dum, duh, DUM, dum…"A Special Place." Meanwhile, everyone else is thinking that it's a good time to go sharpen a pencil.

This "special place" is very similar to the special place in the real world where I put important papers, tickets, books, items of clothing, special snacks, and the like, except for the fact that it is somewhere in the netherworld of my computer. Being visually oriented, I tend to find things by recreating, in my head, the environment where I put something. So, I can say…it's at about waist level, in a corner, with something dark next to it. Then, all I have to do is find someplace that fits that description, and usually, I find the item of my search.

It wasn't long ago that merely saving a file was magical to me, and where it was saved was at the whim of the computer. I was forever frustrating Brad by asking him what happened to my stuff. For some reason, it was never where I thought it should be. He would run "Find" and eventually, there would be my file! How the heck did it get there? "Well," he would say, "you must have put it there." What nonsense! I sure as heck didn't do that. Duh! It was the computer. If I'd put it there, I would have known where it was.

The big problem with computers is that they are very…what should I say…abstract. Everything that is contained in a computer is hidden from view, tucked away in that small box somewhere. You can't spread documents or images out on the desk, table, counter top, or the floor. Although you can bring up a bunch of files, the one on top covers up all the others. Or, there is always the optional joy of attempting to work with several tiny windows. (When I do this, I always feel an affinity with those insane people who inscribe the Bible on a grain of rice.)

Computer documents are also very consistent. Take a text document, for example. One page looks virtually indistinguishable from another. There are no curled corners, no inadvertent pencil marks, no scribbles or notes, no particular flairs of the pen, that instantly identify specific pages to me. With computer documents, I actually have to read (or at least, scan) them to figure out what they are.

And then, there is just the vast amount of information that is possible to be crammed into that little box. I've often wondered just how many filing cabinets, bookcases, drawers, and white legal boxes I would need if all the stuff I have on the hard drives were actually on paper. I doubt if I would even be able to get into my office.

So, how am I supposed to find stuff? Especially, "special" stuff. When I work on a project, I often do a lot of experimenting, resulting in a zillion different versions. I don't like to delete any of them (unless it's something really nasty) until the project is completely finished, just in case. So, when I get a version that is "special," I tend to want to put it…(all together now)…"somewhere special," and not amid all the clutter. Usually, by this time, however, the hard drive is full, so I have to find somewhere else to put it. So, maybe I put it on another drive in, maybe, a 'Temp" folder. And since I know what it is, maybe I give it some cryptic name, 'cause, of course, I couldn't forget what it means. Unfortunately, something that seems so darn obvious at three in the morning isn't the slightest bit comprehensible the next day.

It appears that the trick is to be very organized. And the key to being organized is the ability to categorize. There are two ways that people tend to categorize things. There are those who prefer to "split," known as "splitters." Then, there are those who prefer to "lump," known as "lumpers." "Splitters" and "Lumpers" tend to get into great arguments over which is the better approach. For Splitters, lumping things together is disturbing because they see everything as different rather than the same. They tend to nitpick. They see a turquoise sweater and an aqua sweater. For Lumpers, splitting things into a zillion categories is disturbing because they are overwhelmed by the sheer diversity of things. They see two sweaters.

I'm a hybrid, a splitting Lumper, or maybe a lumping Splitter. I tend to lump first (since it is impossible to lump after you split) and then split. This entails grouping things together under initially broad categories and into subsequently narrower and narrower categories. This works well with computer file hierarchies if there is not much depth involved. However, I have found myself chasing down a file, buried in a brilliantly lumped and split file hierarchy, wasting a lot of time in the process. So, rather than having to go through that rabbit hole during a presentation, I put the file – where? – in "A Special Place."

Eventually, I'll find it.

SIDEBAR FROM BRAD:
IN THE NEXT ISSUE, I WILL DISCUSS THE ORGANIZATIONAL TECHNIQUES THAT I DEVELOPED AND USE WITH MY OWN PROJECTS AND THAT HELPS MY STUDENTS TO MINIMIZE THE PROBLEMS INHERENT IN "SPECIAL" PLACES.

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